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ABSTRACT

Conducted during 1966-67, these 33 case studies were expected to provide insights into various aspects of organizational decision making (especially the ways in which influence is exerted and perceived in specific decisions). Eleven firms, all having headquarters and at least one plant or division in the Chicago area, were chosen from a directory of the 1,000 largest United States industrial corporations. These 11 firms ranged in type from heavy industrial equipment to publishing and musical instruments. Accounts of nonrepetitive (infrequent or first time) purchasing included 11 cases involving decisions to purchase and use new materials, eight on purchasing or leasing business machines, six on buying machinery and tools, five to purchase trucks, two to conduct plant expansion and maintenance, and a decision to obtain furniture for an individual office. In an effort to trace the chain of communication, 180 people were interviewed as to the product and its use, how the need arose, internal and external information sources, the choice of a particular type of product, and factors (including the supplier's role) in the choice of the successful supplier. (LY)

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CASE STUDIES OF DECISION-MAKING IN ORGANIZATIONS:

Purchase Decisions in Business Firms

by

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Martin Patchen

CONTENTS

Page

THE PURCHASE DECISION STUDY 1

DECISIONS TO PURCHASE (USE) NEW MATERIALS

Case 1. Ferromanganese for Steel Castings 8

Case 2. A Resin Binder for Steel Castings 16

Case 3. Plastic Containers for Dairy Products 21

Case 4. Plastic Material for Organ Keys 31

Case 5. Plastic Laminate for Furniture Manufacture 41

Case 6. Auto Part Made of Zinc Rather than Aluminum 50

Case 7. Conveyor Cross-Rods Made of a New Type of Steel 58

Case 8. A Coolant for Cutting Tools 65

Case 9. Rubber Component for Machine Produced 71

Case 10. Hydrochloric Acid for Processing Steel 78

Case 11. A Vanadium Alloy for Making Steel 84

DECISIONS TO PURCHASE (OR LEASE) BUSINESS MACHINES

Case 12. A Copying Machine (Purchase) 91

Case 13. A Copying Machine (Lease) 97

Case 14. A Printing Calculator (Purchase) 102

Case 15. A Bookkeeping Machine and a Printing Calculator (Purchase) 107

Case 16. An Electric Typewriter (Purchase) 115

Case 17. An Accounting Machine (Purchase) [illegible]

Case 18. A Computer (Lease) [illegible]

Case 19. A Data Recording and Communications System (Purchase) [illegible]

CONTENTS (CONTINUED)

Page

DECISIONS TO PURCHASE MACHINERY AND TOOLS

Case 20. Printing Presses 148

Case 21. System for Cleaning Milk Processing Equipment 154

Case 22. A Mold for Plastic Organ Parts 161

Case 23. A Piercing Press 171

Case 24. Body-Maker for Can Manufacture in New Plant 179

Case 25. A Coal Crusher 188

DECISIONS TO PURCHASE TRUCKS

Case 26. A Tractor Truck 194

Case 27. A Pick-Up Truck With Snow-Plowing Blade 200

Case 28. Fleet of "Over-the-Road" Trucks and Trailers (Lease) 206

Case 29. A Pick-Up Truck 211

Case 30. A Lift-Truck 217

DECISIONS FOR PLANT EXPANSION AND MAINTENANCE

Case 31. A Plant Roof Repaired 222

Case 32. Heating Equipment for Plant Expansion (Purchase) 228

DECISIONS TO PURCHASE OFFICE FURNITURE

Case 33. Furniture for an Individual Office 234

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THE PURCHASE DECISION STUDY

I. Who Did The Study

The study was done as part of the Organization Behavior Program of the Survey Research Center, Institute for Social Research, University of Michigan. Within this program, a large number of studies of various facets of organizational life--productivity, morale, leadership, power and influence, etc.--have been conducted over the past twenty years. The study of purchase decision-making was under the direction of Dr. Martin Patchen.

Interviewing for the study was done by the National Opinion Research Center, an affiliate of the University of Chicago, under a sub-contract with the University of Michigan.

The study was sponsored by Time, Inc.

II. Purpose of Study

While questions about how decisions are made in organizations have been asked in other studies of the Organizational Behavior program, the previous studies have not focused on specific decisions. This study is the first in the program to study decision-making in depth. As such, it was expected that the study would prove useful in indicating some of the useful approaches and some of the problems in the study of specific decisions by interview methods.

It was expected also that case histories of specific purchase decisions would provide insights into various aspects of decision-making in organizations. The ways in which influence is exerted and perceived in specific decisions is a subject of particular interest.

Finally, it was anticipated that the results of the study would be useful to those people in business organizations and in marketing who are professionally concerned with the specific type of decision studied--i.e., with purchasing decisions.

III. When The Study Was Done

Exploratory interviews and pre-tests of interview schedules in several companies were conducted in the fall of 1966. Most of the interviewing for the main part of the study took place in January and February 1967. Additional interviews were conducted during March through May 1967 with individuals who could not be reached earlier and with persons in several companies where the interviewing began later.

IV. How The Companies Were Chosen

Names of companies which were asked to participate in the study were obtained from the Fortune Plant and Product Directory of the 1,000 Largest U.S. Industrial Corporations, 1966. Working from the beginning of the alphabetical listing of companies, letters were sent by the study director at the Survey Research Center to the Presidents of companies which had company headquarters and at least one plant or division in the Chicago metropolitan area. These letters explained the purposes of the study, its sponsors, and procedures, and requested the cooperation of the companies in this investigation.

Such letters, followed by telephone calls and sometimes by personal visits from the study director, were sent to companies selected in alphabetical order from the Fortune Directory (approximately thirty-five companies were contacted) until the goal of ten cooperating companies had been obtained. An eleventh company was added to the study after it proved possible to study only one purchase decision in one of the original set of companies.

Since the sample of companies is small and is composed of companies which were willing to cooperate in the study, it is not possible to know the extent to which this sample is representative of all companies listed in the Fortune Directory. The companies included do represent considerable diversity in type of organization and type of product produced. These cases permit us to realize the study's basic objective of understanding purchase decision-making in a variety of specific cases.

V. What Companies Were Included In The Study

Eleven large companies, with headquarters and at least one plant or division in the Chicago area, were included in the study. These companies fall in the following general categories: a) Manufacturers of heavy industrial equipment (e.g., railroad cars, moving equipment, presses--three companies; b) Manufacturers of lighter goods, including consumer products (e.g., farm implements, automotive parts)--two companies; c) producers of food products--two companies; d) producers of musical instruments, especially organs and pianos--two companies; e) steel producer--one company; f) publisher--one company.

VI. How Purchase Decisions Were Chosen For Study

At each company which agreed to cooperate in the study, a person knowledgeable about the purchasing function (almost always the head of the Purchasing Department) was interviewed informally by the project director. The project director indicated that "we'd like to focus not on repetitive purchases where the same product is bought over and over again by the company, but rather on non-repetitive purchases where a product was bought for the first time or had been bought only infrequently before." In clarifying the type of non-repetitive purchase with which the study was concerned, an interest in purchases which required deliberation about whether or not to make the purchase, and/or what type of product to obtain, was emphasized.

A preference was also expressed by the study director for cases of purchase decisions a) which had been made within the last year, and b) for which more than one supplier of the product is available. No minimum or maximum dollar amount for purchases was specified.

Once the general type of purchase to be focused on had been clarified, the project director asked whether the company had made any purchase recently in each of the following product categories: a) office machines; b) office furniture; c) machinery or machine tools of any type; d) cars, trucks, or tires; e) "new materials to be used in your products or for packaging--like new chemical, plastic, or metal materials;" f) "plant expansion or improvement--like air conditioning or heating equipment or new facilities."

A systematic selection of purchase cases from company records was not attempted because it seemed clear that the amount of time required, especially for the companies to select and organize such records, would make this procedure impractical. Instead, recent nonrepetitive purchase decisions within one or more of the categories listed above were suggested from memory, or from consultation with records, by the knowledgeable person or persons at the purchaser company. If a brief description of the purchase decision satisfied the study director that the case met the criteria for inclusion in the study, it was accepted and further basic data about the purchase (e.g. dates of requisition and purchase order, supplier's name) were obtained. In almost all companies, recent purchase decisions which met the criteria were few and there was little opportunity for selection among cases.

It should be noted that, because of the rather informal nature of the purchase case selection, the cases included in the study cannot be said to be strictly representative of any specific universe of cases. However, since the cases included were, by and large, most or all of those which were recalled as being made by the companies within the selected categories during the prior year, it seems likely that these cases are reasonably representative of purchases in these product categories by the companies studied.

VII. What Purchase Decisions Were Studied

An average of three purchase (or lease) decisions were studied at each of the companies, although the number of decisions studied varies among the companies. The total is thirty-three purchase decisions. The products about which the purchase decisions were made fall in the following categories: a) use of new materials (metal, plastics, chemicals, rubber)--eleven decisions; b) office machinery--eight decisions; c) machinery and tools--six decisions; d) trucks--four decisions; e) office furniture--one decision. (A list of all purchase decisions studied is presented below.)

Most of the purchase decisions had been made during the year prior to the interviewing, although several cases of interest which occurred somewhat earlier were included.

VIII. Who Was Interviewed and How Interviewing Was Done

At the Company. For each purchase decision to be studied, the project director asked his informant at the company (usually the head of Purchasing) for the names and titles of those people who were involved in the purchase. These names, along with other basic data about the purchase, were given to the interviewer who was assigned to that particular company.

Each interviewer was told: "You are to make appointments with all those to be interviewed. You should interview all those persons' who had any part in the purchase. Not all of these persons' names will be given to you by project director. As you interview initial persons, you will learn the names of other persons whom you will need to interview."

The original intention was, thus, to follow the chain of communications concerning the purchase so that interviews would be conducted with every person who had any substantial part in the events surrounding the purchase. This intention was, because of practical constraints, only partially realized. The major constraint was that those at the participating companies who were kind enough to offer their company's cooperation in the study almost always felt it necessary to put limits on the amount of personnel time which could be devoted to the study. This meant in some companies, that permission was obtained to interview the persons who had the greatest involvement in a purchase decision, but not those peripherally involved. In addition to this frequent general constraint, it was sometimes impossible to interview specific persons for one of a variety of other reasons - such as refusal by this person on the grounds of lack of time, illness, or the person having left the company.

However, with the exception of a few purchase cases (which were dropped from the study), it proved possible to interview enough persons connected with each purchase decision to get a good description of how the decision was made.

A total of 180 interviews were obtained concerning the thirty-three cases, an average of 5.5 interviews per purchase decision.

The great majority of interviews were conducted on the premises of the company concerned. A few interviews, usually with persons in company facilities located in other cities, were conducted by telephone. Interviewing sessions took about a half hour, on the average.

Suppliers. For each purchase, the interviewer also attempted to interview briefly - this time by telephone - the person at the successful supplier who had greatest contact with people at the company in connection with the purchase. For most of the purchase cases, these interviews, lasting generally about ten minutes, were successfully concluded.

IX. Kinds of Information Obtained.

At the Company. Each person interviewed at the purchaser company was asked about the following subjects:

A. The Product

What the product purchased is and what it's used for

B. How the Need Came Up

Who brought the need to the person's attention, and when

C. The Decision To Get A Product In This Category

1. The part he played in the decision that the company should get a product of this general type
2. With whom he discussed the possible need for getting a product of this type
3. Differences of opinion about the desireability of making the purchase.
4. Reasons for the decision to get this type of product
5. Who had most influence in this decision

D. Sources of Information

1. His sources of information (general question)
2. Information he obtained from people in company, from people outside the company, and from publications

E. Choice of Particular Kind of Product

1. Types of products available
2. Part he played in choosing particular type of product or supplier
3. Discussions he had about choice of particular product or supplier
4. How many suppliers were considered
5. Any differences of opinion about particular type or supplier
6. Why successful supplier was chosen
7. Who had greatest influence on choice of particular product or supplier
8. His contacts with successful supplier

F. Satisfaction with the decision

G. Respondent's duties and background information

Successful Suppliers. The person at the supplier who was most involved in the purchase was asked about:

A. His role in the sale

B. Which persons at the company he had contact with

C. Which persons he thought took part in the decision to buy a product of this general type

D. How he thought the purchaser company knew about the supplier company

E. Which persons he thought decided to buy from this supplier rather than from another supplier

F. Why, in his opinion, the purchaser company decided to buy from this supplier.

X. List of Case Studies of Purchase Decisions

A. Use of New Materials

1. Decision to Purchase Ferromanganese for Steel Castings
2. Decision to Purchase a Resin Binder for Steel Castings
3. Decision to Purchase Plastic Containers for Dairy Products
4. Decisiom to Purchase New Material for Organ Keys
5. Decision to Purchase Plastic Laminate for Furniture Manufacture
6. Decision to Purchase Auto Part Made of Zinc Instead of Aluminum
7. Decision to Purchase Conveyor Cross-Rods Made of New Type of Steel
8. Decision to Purchase a Coolant for Cutting Tools
9. Decision to Purchase a Rubber Component for Machine Produced
10. Decision to Purchase Hydrochloric Acid for Steel Production
11. Decision to Purchase Vanadium for Steel Production

B. Business Machines

12. Decision to Purchase a Copying Machine
13. Decision to Lease a Copying Machine
14. Decision to Purchase a Printing Calculator
15. Decision to Purchase a Printing Calculator
16. Decision to Purchase an Electric Typewriter
17. Decision to Purchase an Accounting Machine
18. Decision to Lease a Computer
19. Decision to Purchase a Data Recording and Communications System

C. Machinery and Tools

20. Decision to Purchase Printing Presses
21. Decision to Purchase System for Cleaning Milk Processing Equipment
22. Decision to Purchase Mold for Plastic Organ Parts
23. Decision to Purchase Piercing Press
24. Decision to Purchase Body-Maker for Can Manufacture
25. Decision to Purchase a Coal-Crusher

D. Trucks

26. Decision to Purchase a Tractor Truck
27. Decision to Purchase a Pick-Up Truck with Snow Plowing Blade
28. Decision to Lease Fleet of Over-the-Road Trucks and Trailer Trucks
29. Decision to Purchase a Pick-up Truck
30. Decision to Purchase a Fork-Lift Truck

E. Plant Expansion and Maintenance

31. Decision to Have Plant Roof Repaired
32. Decision to Purchase Heating Equipment for Plant Expansion

F. Office Furniture

33. Decision to Purchase Furniture for an Individual's office

1. CASE STUDY: DECISION TO PURCHASE FERROMANGANESE

I. Purchaser

The purchaser is a subsidiary of a large international corporation which has several subsidiary divisions with plants in both the U.S. and Canada. This particular subsidiary division manufactures steel castings and forgings in four plants to meet railroad and industrial needs.

The purchaser has a semi-decentralized purchasing policy. The Purchasing Department at the corporate level employs thirteen persons altogether. All capital expenditures must be cleared through the main purchasing office. Also, all scrap material for remelting, all pig iron, all alloys and furnace materials (e.g. iron ore, lime) must be purchased at the corporate level. The plants are given a manual, put out at the corporate level, giving them direction on purchasing policy and indicating which items they are delegated to purchase. On the plant level, the Works Manager has control over purchasing and deals with persons at the corporate level concerning purchasing matters.

II. The Product Obtained

The product obtained was the metal alloy ferromanganese, which was purchased for two of the company's plants. Ferromanganese is composed of approximately 80% manganese and 20% iron, and is used as an alloying agent in the manufacture of carbon steel. The manganese acts as a deoxidizer, imparting both tensile and yield strenth to the steel.

Prior to the purchase of the ferromanganese, the plants were using silicomanganese, which averages approximately 68% manganese and about 15% silicone.

III. How Need For Getting Product Came Up

Because strikes had hit four plants of one of the major suppliers of silicomanganese, the corporate Director of Purchasing anticipated a serious shortage of this alloy. He heard about the strike through one of the supplier's representatives and he also read about it in various trade journals. This occurred in September of 1966.

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*Interviewing for this study was conducted by the National Opinion Research Center, University of Chicago. Interviews were conducted in March and April 1967, with company persons shown in the diagram below as well as with the supplier salesman.

IV. Deciding To Purchase Substitute Alloy

Shortly after hearing about the strike at the supplier company, the Director of Purchasing discussed the problem with the Assistant Director of Purchasing (corporate), who is the direct buyer of alloys. Having made a tentative decision to purchase the substitute alloy, the Director of Purchasing wrote to the Chief Metallurgist and to the Open Hearth Superintendent of Plant A, describing the situation, and asking if this alloy would be suitable. On receiving the letter from the Director of Purchasing (which gave the source being considered, the price, the sizing, and the approximate analysis), the Open Hearth Superintendent discussed the matter with the Assistant Works Manager of his plant. Then the Chief Metallurgist and the Open Hearth Superintendent jointly wrote to the Director of Purchasing Giving their assessment of the situation.

The Director of Purchasing also made contact with the Assistant Works Manager of Plant B, explaining the situation and discussing with him the possibility of purchasing a substitute alloy. The Assistant Works Manager, Plant B, then spoke with the Works Manager, Plant B, about the need for the purchase, and both further consulted the Open Hearth Superintendent at their plant.

The Director of Purchasing also went to Plant B to gather more information about the suitability of ferromanganese as a substitute alloy. He called together a small meeting of the Open Hearth Superintendent, the Chief Chemist and the Assistant Works Manager (who acts as metallurgist) to discuss the new material. The Purchasing Director presented information on a regular purchase order form which stated the test analysis, routing, the weights, and the shipper. The outcome of the meeting was favorable to ferromanganese as a substitute alloy. As the Chief Chemist explained, "We had used...[ferromanganese..before and we anticipated no difficulty in using the material."

The Assistant Works Manager, who worked on the chemical analysis, explained his role more specifically when he said, "I was perhaps helpful in selecting the type we were going to use. I pointed out sizes of the product. We want a specific size range. Our influence here was rather limited. We wanted it in palletized boxes for fork truck handling." The Assistant Works Manager, though he was not enthusiastic about the prospect of having to use ferromanganese certified in an official statement, which was cleared through the Works Manager (Plant B), that ferromanganese could be used, despite its disadvantages as compared to silicomanganese. (The Purchasing Agent, Plant B, was also aware of the problem and, though he was not consulted about either the decision to make the purchase or the supplier, did discuss the matter with the Open Hearth Superintendent and with the Chief Chemist of Plant B.)

There were some differences of opinion among the operating personnel as to whether ferromanganese should be purchased at that time. Several plant personnel said that they would prefer not to purchase ferromanganese until such time as silicomanganese would no longer be available. These persons were not anxious to purchase ferromanganese because as one said, "...it takes more of it, more weight going in, you have to put in another alloy, 50% ferro-silicone. The two combined are more expensive than the one silicomanganese." A second reason was "the possibility of someone getting the wrong material into a specific heat--a mix up of the two different materials." In addition, some plant people were not sure that, with the amount of silicomanganese on hand it was necessary to purchase ferromanganese at that time.

However, after weighing the pros and cons, the corporate Director of Purchasing decided that this purchase should be made. As he explained his intentions, the "80% ferromanganese, which could be purchased from a non-ferro alloy industry, should be tested as a substitute for silicomanganese in Grade B Heats. This would stretch out our limited supply of silicomanganese which must be used for Grade C Heats." The Purchasing Director went on to explain, "It's my responsibility to keep the plants supplied with the materials they need. I felt there might be a shortage of this particular material and I felt that we should have this protection." One plant official commented that "Normally (the corporate head-quarters) purchases what we recommend, but not in this case."

The Director of Purchasing consulted with the Vice-President for Manufacturing before taking any final steps. The Vice-President of Manufacturing described his reaction in saying, "We agreed we should take this protective action to insure supply of the materials. He (i.e. Purchasing Director) called...to my attention that this alternate material was available and I told him to go ahead."

The Purchasing Director then asked that the Open Hearth Superintendent from each plant make up a requisition for the purchase of ferromanganese. The requisition, prepared in November, 1966 and approved by the Works Manager of each plant was then formally approved by the Director of Purchasing and by the Vice-President of Manufacturing.

V. Selection Of Supplier

The next step was the selection of a supplier. There was little discussion on the choice of the supplier as that was left to Purchasing. The decision was made by the Director of Purchasing with the support of the Assistant Director of Purchasing.

The Purchasing Director explained, "We only made one contact for this material. [The supplier] was the principal supplier of this product when we used it years ago." When asked why this supplier was chosen over others, he added, "...they are also a supplier of other products for this company and they are one of our better customers." The Assistant Director of Purchasing said that the facts that "...they wereout of the normal ferro-alloy market and had supplies available," and that their "price was competitive" also served as factors in this supplier's favor.

Having made the decision on the supplier, the selection of the particular grade of ferromanganese had only to be determined. After meeting with the supplier salesman to determine the sizes and grades available, the Assitant Director of Purchasing transmitted information about the variety of grades to the Works Manager of Plant A for decision. As the Purchasing Director explained, "...the Open Hearth Superintendent of each plant had the decision on the type of product." The Purchasing Director spoke with both of the Open Hearth Superintendents and found that "they both came up with the choice of the same grade." Relying on their judgments, as he felt they "had actual experience in this melting process," the Director of Purchasing asked that the purchase order be signed. On December 2, 1966, the Assistant Director of Purchasing signed the purchase order and the ferromanganese was delivered later that month. Tests of the use of the new alloy were then made at both plants.

VI. Sources of Information

The Director of Purchasing (corporate level) was informed both about the product and about the supplier from past experience. As he explained, "We, many years ago, used this same material. We got up to date specifications from one of the suppliers of this alloy." He further explained that the supplier he selected"...was the principal supplier of this product when we used it years ago."

The Assistant Director of Purchasing (corporate level) felt that his most valuable source of information came from the supplier. From their salesmen he gathered information as to the details of the sizes he could furnish. All other details, he said, were "...within the information of the Purchasing Department."

The Purchasing Agent at the plant whose job is to interview salesmen, (but who took no direct role in this purchase), said that the salesmen were his primary and most valuable source of information, because "...they have a vast knowledge of all the items."

The Vice-President of Manufacturing (corporate level) explained that his knowledge of the product and supplier "...was the result of our long experience in this field. I started out as plant metallurgist." He mentioned also as sources of information "contact with salesmen in the trade, and technical literature." He said he saw relevant material in Iron Age but couldn't recall anything in particular in that publication. "This is an accumulation of information over 30 years," he said.

The Assistant to the Works Manager, Plant B, said that the people at his plant received information on the product from "data sheets which give you the chemistry" sent from the corporate Purchasing Director. He also saw relevant material in Iron Age and Steel, explaining, "I always go through price quotations near the end of an issue, (and) any other feature articles--production, availability is always of interest to me." He said that his most valuable source of information came from the salesman, from the successful supplier who "stopped by" and from past experience with this chemical alloy.

The Open Hearth Superintendent, Plant A said that "[The Purchasing Director] got all the information--we didn't get any here." He received information on the product through a letter sent by Purchasing Director.

The Open Hearth Superintendent, Plant B explained, "We had used it before years ago, and I knew all the people who make this type of material in different grades." Information of prices and suppliers, he said, came from the corporate office, (i.e., from the Director of Purchasing).

The Chief Chemist, Plant B, said, "We have literature in our files. (The Purchasing Director) gave information on the product--a regular purchase order form [giving] the analysis, routing, the weights, car number, and the shipper." Asked what sources of information about the product were most valuable to him, the Chief Chemist replied. "(The Purchasing Director) shopped around for these things. We take his word that what he buys will be acceptable--that is, within specification."

The Chief Metallurgist, Plant A, received information through the Purchasing Director, who he explained, "sent us a letter giving us the source he was considering, the price, the sizing and the approximate analysis." Of his various sources of information, the Chief Metallurgist found the Purchasing Director's material to be most valuable because it contained the information noted above.

The Work Managers of the two plants as well as the Assistant Works Manager, Plant A, obtained little information relevant to this purchase. The Works Manager, Plant A, said he "did not get any information" about this purchase and said "no" to probes about possible information from people inside this company, from people outside the company, or from publications. He mentioned here only the Open Hearth Superintendent, whose requisition he signed. His Assistant Works Manager gave similar answers about sources of information. The Works Manager of Plant B likewise said that he got no information about ferromanganese or about supplier of ferromanganese. "This comes to me as a purchase item for approval," he said.

Summary: Number Of Persons (Of 12 Interviewed) Who Mentioned Following Sources:

Past Experience with product	4
Suppliers	6
Person in Company: Director of Purchasing	5
Other person in company*	1
Other: literature in files	1

*Though only six respondents mentioned others in company as a source of information, every respondent had talked about this purchase with someone in the company.

VII. Satisfaction

Asked whether they felt "completely satisfied", "fairly satisfied," or "not too satisfied" with the decision at the time it was made, eight of the twelve respondents replied that they were completely satisfied. Those who said they were satisfied included all three persons at the corporate level, as well as five persons at the plant level. The Vice-President of Manufacturing expressed the feeling of this group when he said, "It gives us a little bit of assurance of continuity of operations. I might say that previous knowledge of the use of ferromanganese assured me there would be no technical probles involved in its use."

Four respondents said they had been "not too satisfied" with the decision at the time it was made. One respondent explained, "This stuff [i.e. ferromanganese] is more expensive. We were leery that it could get mixed up on the Open Hearth platform. Then we would have an off-analysis heat if they used one instead of the other." Another man said he had not been too satisfied "because of the amount of silicomanganese [the plant] had on hand." Two other men were not sure that the purchase had really been necessary. One said,"...there was ne need for it...Our supplier of regular material assured us they would keep us supplied even though they were on strike."

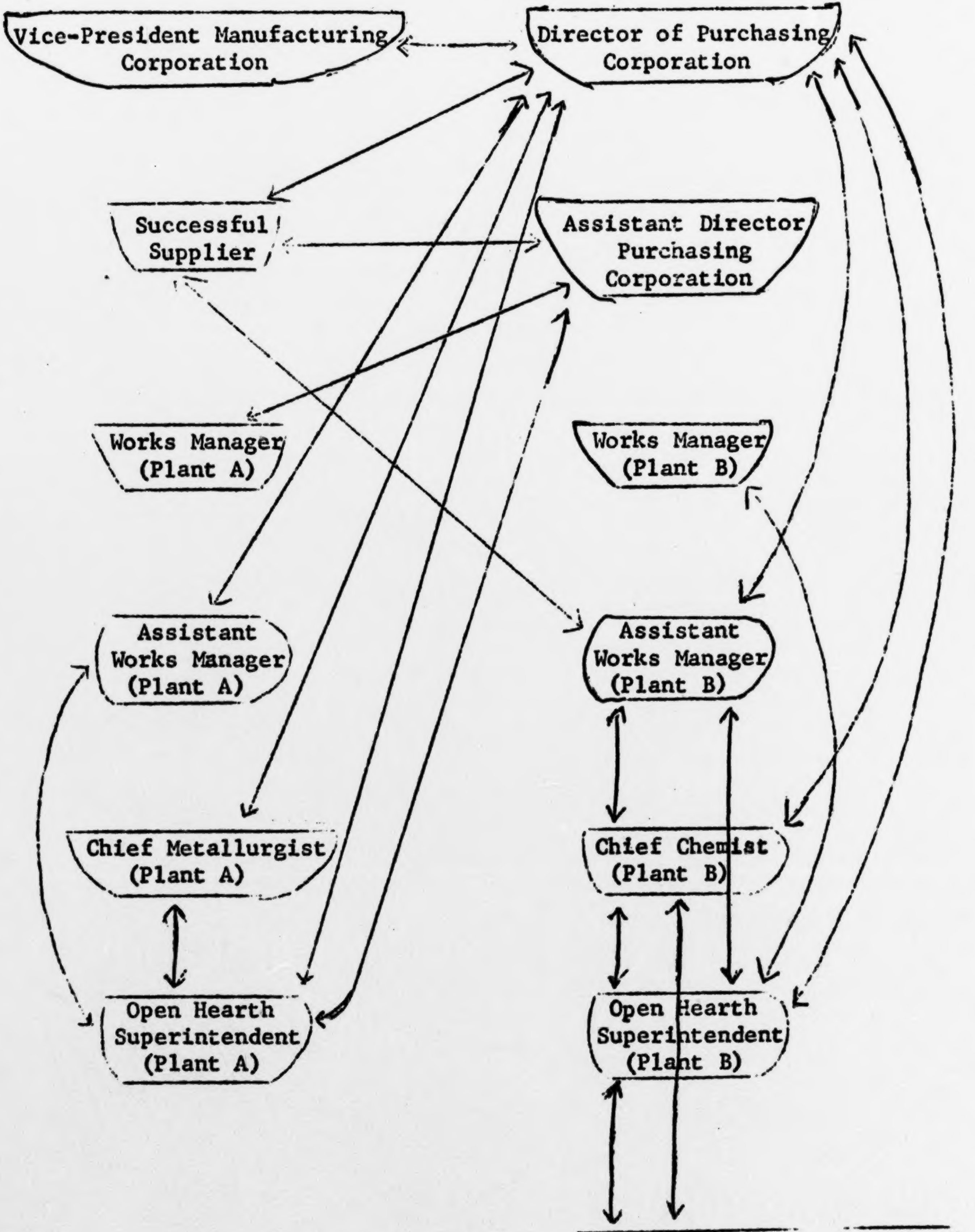
Asked whether they would be in favor of making the same purchase if the decision could be made over again, the same eight respondents who said they were "completely satisfied" with the decision at the time it was made, replied that they would be willing to make the same purchase over again. Generally, thesepeople felt that, in the light of the supply problem that apparently existed, the material was satisfactory and completely adaptable to their uses.

Those respondents who were "not too satisfied" with the decision all said they would not be in favor of making the same purchase over again. The general sentiment in this group was that the purchase of ferromanganese was not necessary and that it was not nearly as satisfactory a material as the silicomanganese.

VIII. Summary Of Persons Involved In Purchase

Top Management: Vice-President, Manufacturing (corporate)	1
Production: Works Manager, Plant A; Works Manager, Plant B; Assistant Plant Manager, Plant A; Assistant Plant Manager, Plant B; Open Hearth Superintendent, Plant A; Open Hearth Superintendent, Plant B	6
Technical Specialists: Chief Metallurgist, Plant A; Chief Chemist, Plant B	2
Purchasing: Director of Purchasing (corporate); Assistant Director of Purchasing, (corporate); Purchasing Agent, Plant B	3
Total	12

IX. Pattern Of Communication Concerning Purchase


Vice-President Manufacturing Corporation
Director of Purchasing Corporation
Successful Supplier
Assistant Director Purchasing Corporation
Works Manager (Plant A)
Works Manager (Plant B)
Assistant Works Manager (Plant A)
Assistant Works Manager (Plant B)
Chief Metallurgist (Plant A)
Chief Chemist (Plant B)
Open Hearth Superintendent (Plant A)
Open Hearth Superintendent (Plant B)
Purchasing Agent (Plant B)
various supplier salesmen

X. Supplier's Perception Of Purchase Decision

The supplier salesman had most contact with the Director of Purchasing and with the Assistant Purchasing Director, in the corporate office. Asked who he thought took part in the decision to buy ferromanganese at that time, he named the Open Hearth Superintendents at Plants A and B. (From the information gathered from these two respondents along with others from the purchaser company, this does not appear to be to have been the case. Both men did advise the Director of Purchasing that ferromanganese could be used as a subsitute alloy. However, the decision was made by the Director of Purchasing with the support of the Vice-President of Manufacturing on whether or not to purchase a substitute alloy at that time.)

When asked how he thought people at the purchaser company knew about his own company and its products, the supplier representative replied. "Well, they have been a customer of ours for a long time. We sold them this product years ago." When asked who it was that decided to buy the product from his company rather than from another, he named the Director of Purchasing (which agrees with information abtained at the company). He commented, "One of the reasons is that their other supplier was on strike. We called on them at just the right time--when they were considering having to get some other material." He added "I wish you could get me another order from them."

2. CASE STUDY: DECISION TO PURCHASE A RESIN BINDER

I. Purchaser

The purchaser is a subsidiary of a large international corporation which has several subsidiary divisions with plants in both the U.S. and Canada. This particular subsidiary division manufactures steel castings and forgings in four plants to meet railroad and industrial needs.

The purchaser has a semi-decentralized purchasing policy. The Purchasing Department at the corporate level employs thirteen persons altogether. All capital expenditures must be cleared through the main purchasing office. Also, all scrap material for remelting, all pig iron, all alloys and furnace materials (e.g. iron ore, lime) must be purchased at the corporate level. The plants are given a manual, put out at the corporate level, giving them direction on purchasing policy and indicating which items they are delegated to purchase. On the plant level, the Works Manager has control over purchasing and deals with persons at the corporate level concerning purchasing matters.

II. The Product Obtained

The product obtained is a liquid resin used to coat and bond sand which is used in making shell molds and cores, in the production of steel castings. The resin was bought for a particular plant or Works, located near the corporate office.

III. How Need Came Up

In the ten years since this works had converted to the shell molding process (from another molding method) many resin binders had been tested. Of those tested, only the resin produced by Supplier A was approved and used for production.

In the Spring of 1965, the sales representative of the company's sole supplier of resin (supplier A) notified the Director of Purchasing (corporate level) that this supplier company was threatened by a labor strike which could result in a drastic reduction in the supply of resin binder. The Director of Purchasing, realizing that "without resin we are not going to operate," brought the problem to the attention of the Works Manager, The Assistant Director of Purchasing, and the Assistant Works Manager. It was, moreover, company policy, emphasized by the Director of Purchasing, to try to have two sources of supply for important raw materials wherever possible. The Assistant Director of

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*Interviewing for this study was conducted by the National Opinion Research Center, University of Chicago. Persons who are starred in the communications diagram, below, as well as a supplier representative were interviewed during March and April, 1967.

Purchasing commented in the regard, "This is a type of product which, at the using manufacturer's facility, it is often more convenient to operate with one product. [However], the economics of being tied to one product cannot be accepted because of the risks of shortage due to strikes, disasters or other causes."

The Purchasing Director said, emphasizing his concern with this problem, "It was my insistance that this be done...I had to push to get this thing moving." He said he discussed the problem with the Assistant Purchasing Agent, with the Works Manager, with the Supply Agent for Materials and Supplies, Purchasing, at the plant, and with the Manager of the Manufacturing Research Laboratory at the plant. As a result of these conversations, it was decided that a second supplier would be contracted, if one could be found to fulfill the technical requirements. The Supply Agent at the plant submitted a formal requisition that a second source be considered, which was approved by the Works Manager.

IV. Selecting A Specific Product And Supplier

The Works Manager met with the Manager of the Manufacturing Research Laboratory and with the Senior Metallurgist and informed them that the decision had been made to find a second supplier of a resin binder. He also informed the General Foreman and Sand Control Foreman, Production Department, of the decision. These two foremen were to help evaluate new resins used in test runs in production.

The Research Lab Manager and the Senior Metallurgist began immediately to search for a resin that would meet the requirements of the company. The Research Lab Manager said he "knew what the material had to do and conveyed that information" to the Senior Metallurgist along with his "knowledge of potential available suppliers." It was the Senior Metallurgist's responsibility he said, "to run the tests that determined which of the available materials would meet our specifications. Based on our test results, we recommended a supplier which most nearly meets our requirements."

The Manager of Manufacturing Research Laboratory said that he was in "continuous consultation about the progress made in the development of the product with the chemists (from supplier company) in control of the process," during the time of the testing.

At least seven suppliers were considered but there was only one whose product could meet the specifications set by the company. The Manager of the Manufacturing Research Lab commented that "we worked with (successful supplier) for a long time, told them what our requirements were. In effect, such a material did not exist. They created it for us."

After a suitable product had been found, the Manager of the Manufacturing Research Laboratory sent the compiled data and his recommendation to the Assistant Works Manager for approval. The Assistant

Works Manager said it was his responsibility to determine "whether the results obtained in the research lab justified the production run ." He discussed the matter with the Works Manager, whose further approval was needed. The Assistant Works Manager noted "This is a major raw material. It could affect the entire operation. If the quality was poor, it could have rather drastic results."

Since there was only one supplier who could meet the specifications of the company there was very little discussion as to the specific supplier to be chosen. A sales representative of the supplier company was notified that their product had tested out satisfactorily. He then met with the Assistant Works Manager, the Director of Purchasing, and the Assistant Director of Purchasing to discuss the price of the resin, which was to be delivered in tank truckloads of 36,000 lbs.each.

In May, 1965, the Supply Agent at the plant with the approval of the Works Manager and the Manager of the Manufacturing Research Laboratory, formally requested that Supplier B be allowed to furnish a share of the company's future requirements for use in binder. In July, 1965, the Assistant Director of Purchasing submitted the purchase order, which was approved by the Director of Purchasing.

V. Sources of Information about Product and Suppliers

Asked about the ways in which they got information about the product or about suppliers of the product, people at the company gave the following information:

1. The Supply Agent, Materials and Supplies, Purchasing said he got general information about the shell molding process from Foundry Magazine and from Purchasing. He also was informed by the Manager of Manufacturing Research Laboratory about the qualities of the new source of resin and by the Works Manager. He felt that his most valuable sources of information were the "research laboratory reports" because "they were specific, taking in the general needs of our company, (and) our research department has become expert in this field."

2. The Senior Metallurgist, Manufacturing Research Laboratory, cited several sources for his information. He saw advertisements and read occasional articles written by representatives of supplier companies in the Foundry and Metal Progress. He also utilized information obtained at technical society meetings, which frequently discussed the properties and availability of various products. Another useful source of data he said, was his direct contact with the sales representatives of companies which were considered prime producers of the raw material used in production of the resin, i.e. of phenol and formaldehyde. However, he felt his most valuable source of information was "what we found out in our own laboratory as a result of a large number of tests which were made on this and similar products."

3. The sources of information for the Manager of the Manufacturing Research Laboratory, he said, were the results of the tests made under his supervision and his personal contact with sales and technical representatives of the various potential suppliers.

4. The Works Manager said he got all of his information from the Manager of the Manufacturing Research Laboratory and from the reports from that department and from the Director of Purchasing.

5. Two sources of information were cited by the Assistant Works Manager. He saw some"general advertisements about resin" in Foundry Magazine and Modern Castings. However, most of his data came from the research reports, which he felt were most valuable because they were the "only source of actual test data."

6. The Director of Purchasing (corporate level) said he "obtained supplier's names who might be a logical second source for this product" from the Manager of the Manufacturing Research Laboratory. He had also had past experiences in procuring this type of material for another plant. However, he felt his most valuable sources were the "test reports obtained from our Manufacturing Research Lab [because] we had to obtain a resin that would produce the same results as the resin from our existing source."

7. The Assistant Director of Purchasing (corporate level) said he got information from "the sample tests that we made in our laboratory. Without test acceptance, the product would be useless." he said.

Summary: Number of Persons who got Information from Following Sources:
(Of Seven Interviewed)

Others in company	7
Supplier salesman	2
Previous Experience	1
Article or ad in magazine	3
Other; Technical Society meetings	1

V. Satisfaction with Purchase Decision

Five of the seven persons interviewed said they were "completely satisfied" with the decision at the time it was made. They all gave similar reasons. As the Assistant Director of Purchasing put it, "We were getting a second source of what we felt would be an acceptable product at a competitive price."

The Works Manager said he had been "not too satisfied" because "we had some difficulties in the use of production in our shop. [It] didn't live up to expectations. [It] did not have the strength comparable to the resins we were then using." The Director of Purchasing said that "at the time of the purchase I couldn't feel satisfied until the material was used and the results obtained."

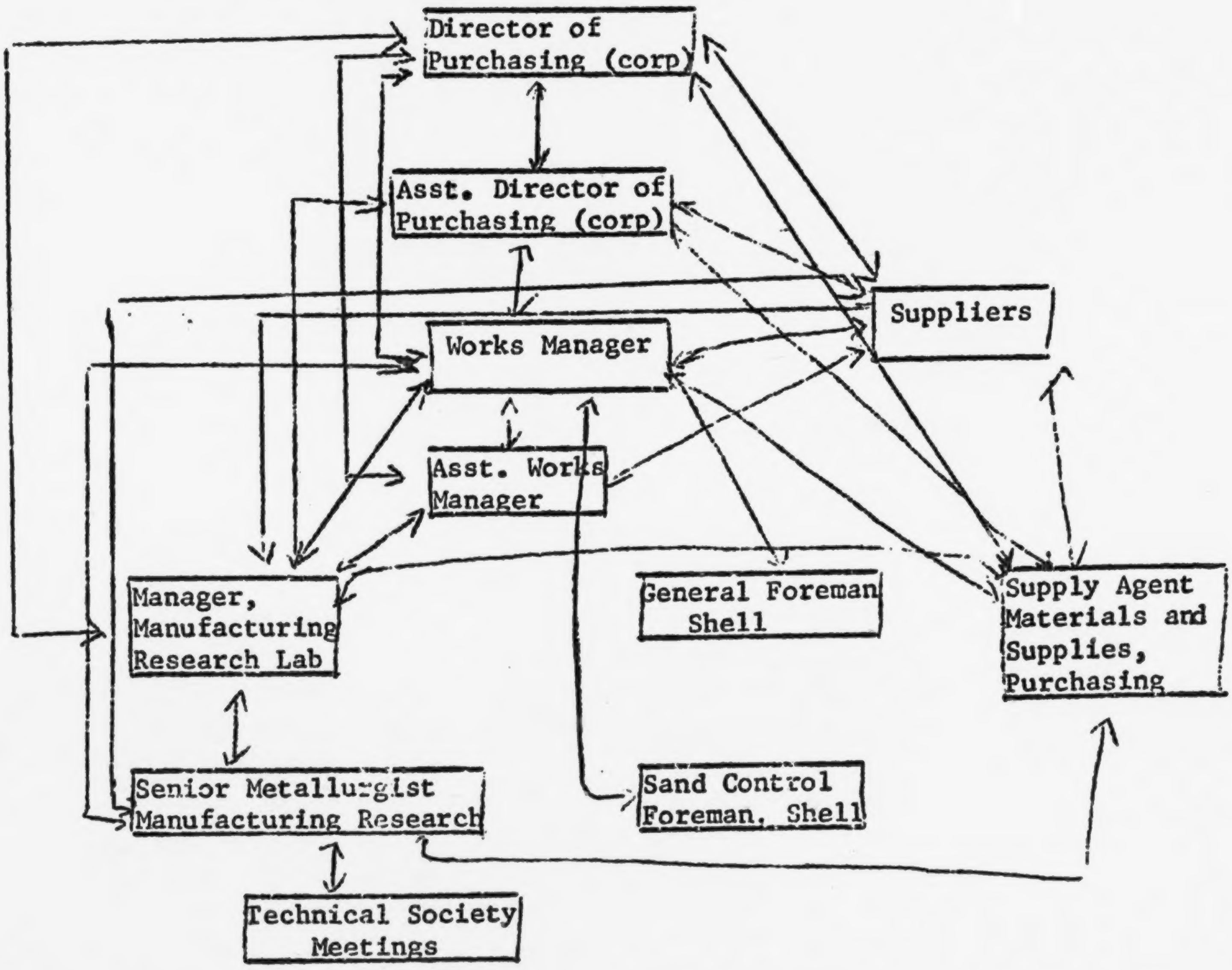
However, all of those interviewed indicated that they would be in favor of making the same decision again, if the decision could be made over. The Manager, Manufacturing Research Laboratory, stated that, "Fundamentally, laboratory evaluation of the material pointed out the desirability of production trial." The Supply Agent felt that "no other sources are able to give us the grade of resin we need." Similarly, the Senior Metallurgist, Manufacturing Research Laboratory, said he would make the same decision again because "we haven't found a better source of material." The Assistant Works Manager expressed the feeling that "it has worked out satisfactorily." The Director of Purchasing, who had withheld his judgment at the time the decision was made, indicated his willingness to make the same purchase again because "It's my policy on a material such as this that we always have more than one source of supply." The Works Manager, who had had some doubts about the new resin, also said that he would make the same decision again now because he felt that "In subsequent production, lots of resin did meet the strength requirements."

VI. Summary of Persons Mentioned as Involved in Purchase Decision*

Purchasing:	Director of Purchasing (corporate level); Assistant Director of Purchasing (corporate level); Supply Agent, Materials and Supplies	3
Administrative:	Works Manager	1
Production:	Assistant Works Manager; General Foreman, Shell; Sand Control Foreman	3
Technical:	Manager, Manufacturing Research Laboratory; Senior Metallurgist	2
	Total	9

*Also, persons at technical society meetings discussed this type of product with the Senior Metallurgist.

VII. Pattern of Communications Concerning Purchase


Director of Purchasing (corp)
Asst. Director of Purchasing (corp)
Suppliers
Works Manager
Asst. Works Manager
Manager, Manufacturing Research Lab
General Foreman Shell
Supply Agent Materials and Supplies, Purchasing
Senior Metallurgist Manufacturing Research
Sand Control Foreman, Shell
Technical Society Meetings

X. Supplier's Perception of Purchase Decision

The District Manager of the supplier, who said the whole sale had been handled through him, said that he had most contact with the Supply Agent from the plant and that he also had contact with the corporate Director of Purchasing and with the Sand Control Foreman, Shell Operations at the plant. (Informants at the company indicated that the latter contact took place after the purchase decision had been made.)

Asked who he thought took part in the decision to buy a resin at that time, the supplier representative named the Supply Agent, the Sand Control Foreman, the Assistant Plant Manager, the Senior Metallurgist, and the Director of Purchasing. He named the same people as deciding to buy the product from his company rather than from another supplier. "It was an agreement between all of them," he said. (The persons named were, in fact, involved in the purchase decision, along with the Manager of the Manufacturing Research Laboratory and the Works Manager.)

When questioned about ways in which the purchaser company knew about his company and its products, the supplier representative replied, "We've been calling on them for eleven years. It was just recently (within the last two years or so) that we were able to get in by having a product which met their specifications."

The supplier representative thought that the purchaser company decided to buy resin binder from his company rather than from some other supplier because, "we had a material that was very close to what they were using...I don't believe there is another material comparable available right now." These reasons coincided with those given by people at the purchaser company.

3. CASE STUDY: DECISION TO USE PLASTIC CONTAINERS FOR DAIRY PRODUCTS

I. Purchaser

The purchaser is a mid-western based corporation with several divisions, most of them in the middle west. It prepares and packages foods. The bulk of its sales sre in dairy products, both fluid and non-fluid. Purchasing is done both at a corpoarate and divisional level. Some divisions of the corporation have no separate office for purchasing and in such cases the Divisional Managers are responsible for purchasing. Centralized purchasing is done for services; for durable goods such as vehicles; for packaging materials common to all divisions; and for durable goods which, though not common for all divisions, are expensive. Where packaging items are concerned, the corporate office has guidlines for materials and suppliers, and the divisions usually are given their choice among several suppliers. The corporation purchasing function is handled by one man, the Director of Purchasing, but persons employed in other capacities assist him for particular purchases about which they are knowledgeable.

II. The Product Obtained

The product obtained is a plastic container for cottage cheese, sour cream, sour "half-and-half," and yogurt. Of contemporary design, it is the package in which the consumer buys the product, and replaces a previously-used container of waxed paper sidewall lidded with paper, metal of plastic cover.

III. How The Need For Getting The Product Came Up

The company President said that about three years ago (1964) there was a"continual presentation to persuade us to change the cottage cheese container, made jointly by the Marketing Manager and the Director of Purchasing to the Operating Committee Manager meeting." (Initially it was refused by this committee, consisting of five** Divisional Managers, but was later accepted.)

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*Interviewing for this study was conducted by the National Opinion Research Center, University of Chicago. Interviews were conducted with the Director of Purchasing in January, 1967, with the Presidentand the Division General Manager in March, 1967 and with the Marketing Manager and with a supplier representative in April, 1967.

**Number of divisions is based on Fortune Plant and Product Directory of the 1000 Largest U.S. Industrial Corporations, 1966.

After discussions about the cottage cheese container had resulted in a switch to plastic containers for this product, a need for switching other product containers as well was perceived by the General Manager of Division A. This man, who came to the company after the cottage cheese container had been changed, said that among the first things he noticed were "several outmoded packages being used by the company for other dairy products." He brought up the subject with various persons in the company, the first being the Director of Purchasing, whose support he received. He appears to have catalyzed wider discussion at Operating Committee meetings about the need for updated containers for the other milk products.

IV. Deciding To Get The New Containers

Stage 1: The Cottage Cheese Container. The first decision to buy a new cottage cheese container was primarily in the hands of the Director of Purchasing. He, along with the Marketing Manager and the President of the company, attended an Operating Committee meeting at which the idea of switching the material of the container was presented.

During the course of study of the possible conversion from paper to plastic, the President was kept informed by the Director of Purchasing and by the Marketing Manager. "They would keep me advised as to the progress they were making, with supplier etc., just generally," he said. The President commented further, "Since we were attempting to purchase this package for multi-plant operation, it was necessary to look at it from more than a local point of view, which complicated the purchase somewhat... Prior to adoption of this package we had a miscellany of packages throughout our many divisions. We were attempting to find not only a better and economical package but also to find a uniform package for all divisions."

"In order to ascertain what such a change would involve in every respect," the Purchasing Director talked with the Marketing Manager, with a representative of the company's advertising agency, with five other sales people (three division sales managers, the General Sales Manager and the Supermarket Sales Manager) and to four production people (three production managers and one production person who "had no title at all.") The Director of Purchasing also talked about the matter with the Executive Vice-President and with the President. The Marketing Manager, who was interested in the product from the standpoint of its potential to increase sales, spoke to persons from "various divisions", especially to the Vice-President of the Chicago Division. He was also consulted by the Purchasing Director about "marketing information--how the container [would be] accepted in the market place, its virtues, and my opinion as to whether it was suitable."

Initially, one respondent said, the changeover to the plastic cottage cheese container was opposed by the people in the company that "were accustomed to the other package and were satisfied. [They] didn't think the change was important." The main issues of discussion, according to the President, were cost, inadequate color reproduction on the plastic, whether the package would be durable under extreme cold temperatures, and whether the filling equipment already in use could be adapted from paper to plastic. "Until these four problems were resolved," remarked the President, "our people could not present this as a potentially acceptable item." These problems were finally resolved by what the Marketing Manager describes as "a long slow process," involving close cooperation between suppliers and the purchaser.

The color problem was solved by working with three suppliers to get the printing right, and was approved by the Quality Control Manager, Division A. The Engineering Department in Division B conducted experiments on the plastic under the aupisces of the Division Manager of Division B and of the Plant Manager, DivisionA. These experiments were intended to assess the durability of the material under cold temperatures and, according to the President, the recommendations of the Engineering Department resulted in new "technological developments on the part of the packaging companies."

The Executive Vice-President investigated the product from "an operation standpoint." Before approving it, he wanted to know, he said, if "the package would hold up, would it work on the machines?" The packaging companies also "participated with us," reports the President, "to make sure that it [the plastic container] would fill properly with our present equipment." The General Manager of Division A mentioned in this connection that the Plant Manager, was consulted by the Director of Purchasing to find out "if a certain type of container would go through his filler machine." Once these issues were satisfactorily worked out, the divisions heads were finally convinced.

The cottage cheese container was purchased basically because it would help improve sales. The Marketing Manager who looked into "what competitors were doing in various markets, what kind of designs were possible," was mainly interested in finding an attractive design for the package, and in establishing a uniform package for all divisions, so that the container would serve as an advertisement in itself.

Stage 2: Containers For Other Products. As noted above, after the changeover was made for the cottage cheese container, the General Manager of Division A suggested changing the containers of the company's other milk products, specifically yogurt, sour cream, and sour half-and-half. Having received the support of the Purchasing Director, he then, he said "approached only those who might be sympathetic--the younger men in particular." These persons included the Branch Manager of Division A, the Sales Manager, and the Vice-President of the corporation's advertising agency who is, the General Manager said, a "real bug on updating our product." He spoke also to the Marketing Manager and to the Vice-President of Division A.

Even though one package switch had already been accomplished, the idea of extending the change to other products met with resistance, particularly by a high official of one division. Moreover, one respondent said, some of the people in that division were "emotionally attached to the old style of packaging." Their reasoning, he said, was: "The product is responding well; the consumer is buying it; let's leave things as they are."

However, the General Manager of Division A proceeded to get a design for a new container to show what it would look like. Since, as with the cottage cheese container, the main reason for the changeover was to increase the product's marketability, the package design, was of primary importantce in deciding whether to adopt a new container--in a way more important than the new material involved. The General Manager of Division A said, "The decision to change didn't come from production or accounting; it was a marketing decision...the package change would create a more merchandisable product on the grocery shelf, [one]more attractive to the consumer. It would create in the consumer a desire to buy. It also brought coloring and life to the package." His strongest support, the General Manager said, came from the Vice-President of the (advertising) agency whom he said, "offered me strongest support, spurred me on." Also influential in the decision he said was the Director of Purchasing who, he mentioned "had the art department come up with design concepts."

The sour-cream, half-and-half, and yogurt containers were ordered almost a year after the cottage cheese containers, in November 1966.

V. Selecting A Specific Type Of Product And A Supplier

Stage 1: Cottage Cheese Container. With regard to the cottage cheese container, the Director of Purchasing had considerable responsibility for choosing the supplier. "I made the choice," he said, "with assitance from sales and marketing people." These, especially the Marketing Manager, gave him information on "specifics, details like size and design."

He considered "all suppliers who were capable. [They] were given an equal opportunity." The successful supplier, which was the same company that had been supplying paper cottage cheese containers, to the comapny, was chosen from among eight potential suppliers. The Purchasing Director had contact with the supplier's representative "because they could give me a much broader and current picture, not only of ther own product, but of the industry as a whole."

While "quality, service, and price" were important factors in the selection of a supplier, the supplier's "image in the market place" and the purchaser's "past experience with specific companies" was most significant, the Director of Purchasing said. The President, who was kept informed by the Marketing Manager and the Purchasing Director, said that "the supplier's availiability to deliver to our many production plants" was also an important factor in making the choice (the new package was to be used uniformly in all divisions, not just for Division A, where the decision to make the changeover originated.)

Stage 2: Containers For Other Products. When it came to selecting a supplier for the container of the company's other milk-products, a likely contender was the company already chosen for the cottage cheese containers. The General Manager of Division A said that he "virtually had the complete decision as to which supplier would be used" for these containers and his concern with the design of the container led him to reject the cottage cheese package supplier already being used by the company in favor of a supplier that could provide a more apt and artful package.

He reports that there are "three or four major suppliers for the dairy business from among which he might have chosen. "Since we had already changed one container for cottage cheese, both supplier B and Supplier A (which supplied the cottage cheese container) were fiercely competing. All the mojor companies had called on us, but we felt only these two companies were big enough to help with the design concept. They had a great deal of help to offer--they placed their art departments at our disposal, suggesting color combinations, etc."

The General Manager of Division A said that the art department of the successful supplier "really sold it for them." The department "took the initial idea, the art design that our company had created, elaborated on it and from it developed a modern, eye-catching design. Supplier A's department missed the whole concept."

In the case of the second changeover, price was not a deciding factor. "At this point, I was only concerned with concept and not price...We knew that (Supplier B) was competitive in price, having gone through the cottage cheese purchase. We also knew that (Supplier B's) servicing was very good,"the General Manager said. The successful supplier was chosen he added because "they serviced our needs, bringing to positive conclusion the design of the carton art work."

Once supplier B won out over its competitors for the additional business of the purchaser, there were continued contacts between persons at each company, specifically the General Manager of Division A and the Regional Manager and a Sales Representative from the supplier. "Someone was constantly coming in for refinement of the package--that is from the rough art work to the hand-painted package," the General Manager said.

VI. Sources Of Information

The President said he recieved relevant information from "trade magazines" (he didn't recall the names) in which there had appeared articles on packaging material and the names of competitors which were using plastic or considering using it. He recalled also one article on "the economic value of converting from paper to plastic." He said he was also kept advised of progress being made, with the supplier, etc. by the Marketing Manager and by the Director of Purchasing. The Marketing Manager told him "what competitors were doing in various markets, what kind of desings were possible and the advantages of a uniform package which we did not have, particularly with regard to the advertising program."

The Director of Purchasing said he got information from a supplier representative, from "the experience of our own people," from publications, and from "feedback to suggestions we made to potential suppliers." He noted more specifically getting information from the Marketing Manager about how the "container was accepted in the market place, its virtues, and his opinion as to whether it was suitable." In the trade journals Dairy Review and Food Engineering, he saw "articles on the subject written by staff people, or [about] suppliers, or articles on operations where this material was used."

The Marketing Manager said that, "Some of our customers like (X Tea Company) came to us and asked us to look into this container. This was not unique with us." He said that "our own sales experience in the super market" was the most valuable source of information about this product.

The General Manager of Division A got information about the product from three sources: a) the two major suppliers of the product who, among other things, he said, suggested color combinations for the packages; b) the Purchasing Director who, he said, "had gone through the cottage cheese packaging change [and]...was knowledgeable;" and c) from several trade publications: Milk Review, American Dairy Review, Advertising and Sales Promotion, and Food Processing and Marketing, (all monthly publications) and Dairy Record which he termed a "biography of the dairy industry." He said he saw "everything" in these publications, adding that he finds Dairy Review most valuable because "it has new ideas, new concepts."

The General Manager of Division A felt that all the information sources named were valuable. "Anyway," he said, "it was mainly the collaboration of the supplier with us in an attempt to come up with something that finally sold theidea."

VII. Satsifaction With Purchase Decision

The four persons interviewed (President, Director of Purchasing, Marketing Manager, and General Manager, Division A) all said that they had been completely satisfied with the purchase at the time it was made. Most commented that those involved had done a thorough job of screening and investigation in choosing the product.

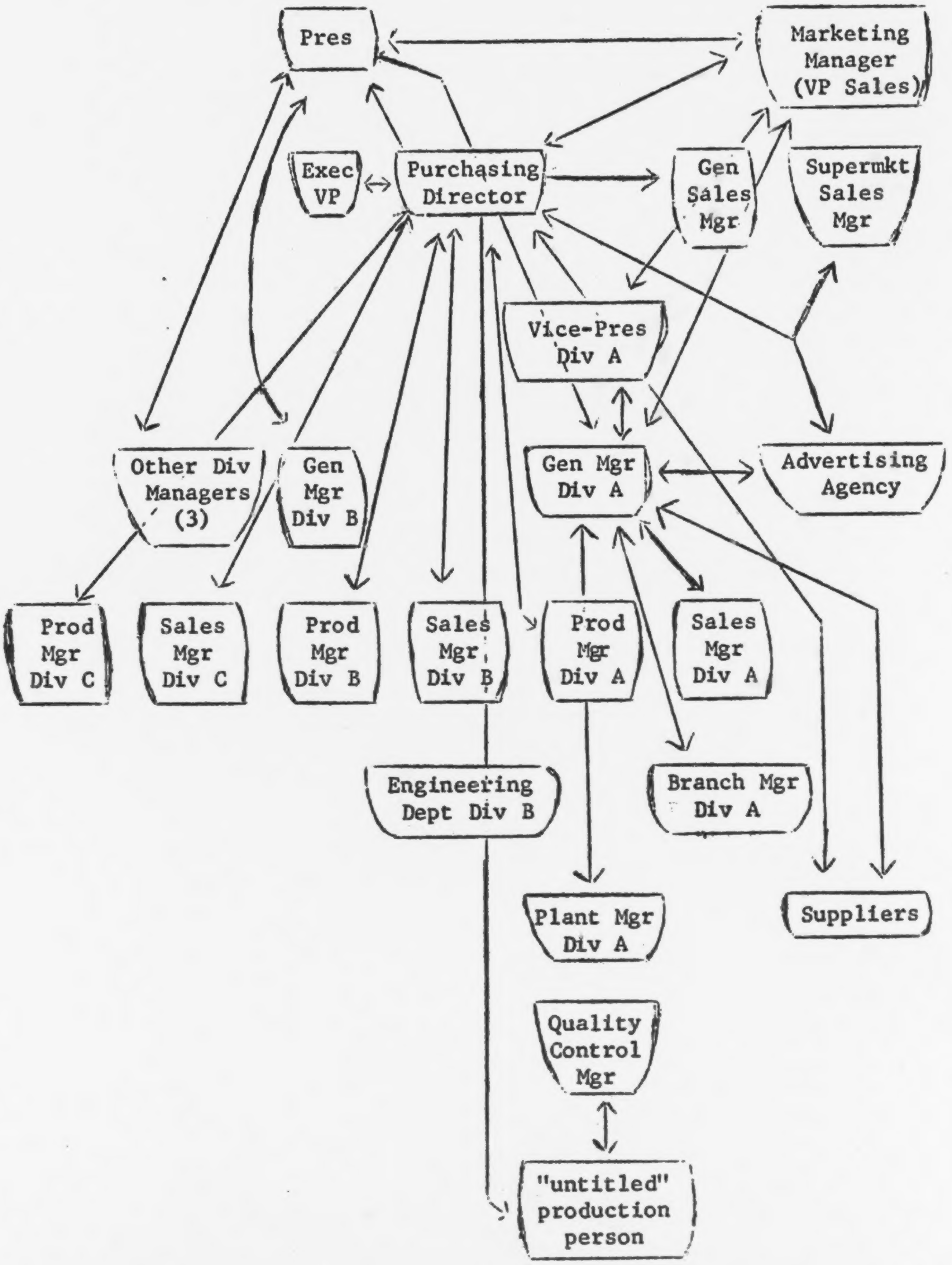
Three of the four said they would be in favor of making the same decision again if the decision could be made over. The President said he would repeat the decision because "I know of nothing at this point that would lead me to believe that we made a bad selection." The General Manager of the division said he would repeat the decision "because with few exceptions, I've been satisfied with the product." The exceptions, he said, are that the supplier puts out some cartons with smeared ink or faded color, and neglects to treat the plastic for static electricity to provent dust adhering to the package. The supplier "gets a little lax in quality control. I'm now continuing to deal with them but if they let me down some more, I would consider another supplier," he added. The Director of Purchasing said that he was not sure whether he would favor making the same purchase decision again because it is company policy to re-examine these decisions. "We re-evaluate every year," he said.

VIII. Summary: Persons Mentioned As Involved In Purchase

Top Management: President; Executive Vice-President; Vice-President, Division A; General Manager, Division A; General Manager, Division B; Other Division Managers (3) (members of Operating Committee)	8
Sales: Marketing Manager; Division Sales Managers (3); General Sales Manager; Supermarket Sales Manager	6
Production: Production Managers (3); other "untitled" production person; Quality Control Manager; Plant Manager, Division A	6
Purchasing; Director of Purchasing	1
Engineering: Head, Engineering Department, Division B*	1
Other: Branch Manager, Division A; Vice-President, advertising Agency	2
Total	24

*Other unspecified persons in Engineering Department of Division B were also involved.

IX. Cverall Pattern Of Communications Concerning Purchases*



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*Since organization chart could not be obtained, above diagram may not represent organizational relationships precisely.

X. Supplier's Perception Of Purchase Decision

The Manager of Packaging Sales for supplier A, who supplied the cottage cheese containers, said that every phase of the transaction was channelled through him. He said he had "most direct contact...face to face discussion" with the Director of Purchasing. He said he also had contact with the General Manager of purchaser Division B in the course of "servicing the contract." Asked who he thought took part in the decision to get the plastic cottage cheese containers, he named only the Vice-President of Division A. (Persons at the purchaser company did not stress this person's role in the purchase.)

He said that the purchaser company "knew of us because we were supplying them [with paper containers.] In addition our company has a good corporate image." He thought that the decision to buy the cottage cheese containers from his supplier company was "a sort of group decision--initially (the Executive Vice-President) in conjunction with (the Director of Purchasing). In renewing the contract, the emphasis swung stronger to (Director of Purchasing.)." (Information from the purchaser company also suggests that the Director of Purchasing was important in this choice, with the advice of the Sales people). He thought the decision to buy the cottage cheese containers from his company was due to "our total image and proposal [being] better than any of the others presented...our image from past esperience and performance was good, so they gave us the business."

At Supplier B, from which plastic containers for sour cream, sour half and half, and yogurt are being purchased, the persons who had greatest contact with the purchaser company was the Packaging Salesman. He said he had most contact with the Director of Purchasing, also had contact with the Marketing Manager and with the General Manager of Division A, and had "minor contacts" with the Vice-President of Division A and with the Executive Vice-President. Asked who he thought took part in the decision to buy plastic containers for these products, he named all of the five people with whom he had contact. (These persons did play a prominent part in the decision.)

Asked how people at the purchaser company knew about his own company he said, "95% of what they know came from me." He named six trade publications and one general publication in which his company advertises, then said, "Advertising is of significant assistance but direct contact is most important." He added, "Actually we had been calling on (purchaser company) since 1962. They hadn't used our services. Then when there was a change in personnel, the attitude was completely different."

Asked who he thought it was who decided to buy from his company, he named the Director of Purchasing and apparently was not sure whether or not the General Manager of Division A was involved. (Company personnel indicate that the General Manager was most influential in this choice.) The supplier salesman expressed his belief that the Director of Purchasing "and others at (purchaser company) believe that (Supplier B) is the kind of company to whom they wish to relate over a long term. (Purchaser company) is very much of the philosophy to develop long-term thorough relationships with suppliers and customers. [This was corraborated by the Director of Purchasing.] I guess they felt (supplier B), a highly research-oriented company, was going to be around for a while--a better long-term bet than another company that's only interested in making a fast sale. Of course our product is excellent and priced competitively, and far better-looking than their old packaging."

Purchase Decision Study
Survey Research Center*
University of Michigan

4. CASE STUDY: PURCHASE OF NEW PLASTIC MATERIAL FOR ORGAN KEYS

I. Purchaser

The purchaser is a well-established designer and manufacturer of high quality organs and pianos. The main division of the company produces a large number of organ models and employs about half of the total company personnel of 3000 employees. This division has five plants within the same city. Other divisions of the company make audio system components and precision electronic devices for commercial and military uses.

The Purchasing Department of the main division, where this study was done, employs eighteen persons and processes about 300 requisitions per week.

II. The Product Obtained

Melamine is a thermo-setting plastic of high impact strength. It was purchased for use in making the white keys of organs, specifically of higher-priced organs, both manual and electronic. Previously, both implex, another thermo-plastic, and betel, a hard natural vegetable substance, were used to make the keys.

III. How Need for Getting Product Came Up

After receiving complaints from their customers, dealers complained to the company that the implex keys were too easily scratched and that the keyboard lost its beauty quickly, becoming yellow. Those in Marketing, including the Vice President of Marketing, as well as those in Engineering, were aware of this problem. It was within the Engineering Department, however, that the idea of a switch from the previous materials used (primarily implex and betel) to another material was first discussed. Those in the company who discussed this idea during the first few months of 1964 were the Vice President of Engineering, Engineering Department, the Senior Mechanical Engineer, and a Buyer, Purchasing Department.

Another factor which figured importantly in the switch from implex and betel keys to a new material was a change in the design of the manual model organs. In early 1964, the Style Consultant of the Engineering Department designed a new model organ with an overhanging keyboard. The model required a key which could withstand great pressure. Betel was hard but too costly; implex's cost was not prohibitive, but it was too soft and likely to scratch and yellow.

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*Interviewing for the study was conducted by the National Opinion Research Center. Interviews were conducted in January 1967 with the Vice-President, Engineering; a Senior Mechanical Engineer; a Senior Project Engineer; the Director of Purchasing; the Vice President of Planning; the President; and representatives of two supplier companies.

The Vice President of Engineering subsequently discussed the need for a new material with the President at several informal meetings during the first few months of 1964. Also present at these meetings was the Director of Purchasing. Considerable further discussion within the company then took place. The Vice President for Engineering brought this need to the attention of the Senior Mechanical Engineer in October of 1964. The Senior Mechanical Engineer discussed the need with the Vice President for Engineering and with the Senior Project Engineer, Engineering Department. The Senior Project Engineer discussed the need for some new material with the Senior Mechanical Engineer, with the Cabinet Designer, and with the Vice President for Engineering. The Vice President for Engineering, in turn, talked with the Vice President of Planning, Planning Department. The latter also discussed the matter with the Purchasing Director. At the center of this pattern of discussions was the Senior Mechanical Engineer who, after his talks with the others, as mentioned above, and after careful study of the problem, recommended the purchase of melamine to the Vice President for Engineering.

Summary of Persons Involved in Discussing Need:

Top Management	2
Engineering	3
Purchasing	2
Marketing	1
Techinal Specialists (Style Consultant and Cabinet Designer)	2
Total	10

IV. Deciding to Get a Product in This Category

The Senior Mechanical Engineer, Engineering Department, who discussed the possibility of obtaining melamine for the key mold with the Vice President of Engineering and the Senior Project Engineer, designed a key for the new model organ, and selected the type of material to be used (i.e. melamine), the grade of material, and the special color which he recommended for use. As the Senior Mechanical Engineer put it, "I studied different specifications and made the determination to get melamine. It met the specifications for the job we were doing."

The Vice President for Engineering, Engineering Department, discussed the new key design with the Senior Project Engineer, as well as with the Director of Purchasing. The Vice President for Engineering also received the evaluation and recommendation of the Chief Mechanical Engineer, Engineering Department (not the same as Senior Mechanical Engineer), who had tested the material and keyboard design. Also involved in the discussion about getting melamine, though they had no direct responsibility for the decision to make this purchase, were the Vice President of Planning, who spoke with the Director of Purchasing, with the Vice President of Engineering, and with the President; and the Senior Project Engineer, who discussed the idea of buying melamine with the Buyer, with the Vice President for Engineering, and with the Senior Mechanical Engineer.

Initially there was considerable uncertainty about the advantages of switching to the new plastic. Doubts centered around the somewhat higher cost of the new material, its technical feasibility, and the question of how the new keys would look. However, as the Director of Purchasing stated, "We found it was feasible and the cost estimates were not too exorbitant." The new material has a bone-like appearance, and had the advantages of being hard and scratch and burn resistant.

After the series of discussions outlined above, the Vice President for Engineering approved the proposed new key design and material. Then the President of the company, after discussion of the proposed change with the Vice President of Planning and with the Director of Purchasing, gave final approval for the purchase of the new plastic. The President favored the change to melamine because he felt that it would be more satisfactory than the material (implex) then in primary use, while costing approximately the same.

V. Selecting a Specific Supplier

Three potential suppliers were considered. No one supplier was mentioned as having been considered more seriously at first than the others.

The Senior Mechanical Engineer discussed the choice of a particular supplier with the Buyer, and with the Director of Purchasing, and was consulted by the Vice President for Engineering about the supplier to be chosen. The Vice President of Engineering had the greatest influence in the choice of supplier since, as he said, the plastic key "was my responsibility." After assessing the skills and operational process of the several suppliers under consideration, he concluded that one in particular was preferable to all others. After discussing his conclusions with the Senior Mechanical Engineer, the Vice President of Engineering recommended to the Director of Purchasing that this supplier be chosen. The Vice President of Engineering commented, "We considered his skills and (Senior Mechanical Engineer) saw his operation and we were convinced he could do the job." The Director of Purchasing discussed the choice further with the Senior Mechanical Engineer, with the Buyer, and with the Vice President of Planning, Planning Department. Formal approval for the purchase from this supplier was given both by the Director of Engineering and by the President. The purchase order was issued in January 1965.

The President, although giving his approval to the choice of the supplier, expressed reservations about the choice because of this supplier's lack of experience. The initial supplier turned out, in fact, to be unsatisfactory because the keys of melamine he supplied were mottled in appearance, and because he was unable to keep up to the desired production schedule. The Vice President for Engineering arranged for the withdrawal of the key mold from this supplier and the contract was subsequently given to another supplier with which the company had previous experience.

Contact with Successful Supplier

The Senior Mechanical Engineer discussed the problems of building the key mold with the President of the successful (initial) supplier at the organ plant. Then, accompanied by a Buyer, he went to the supplier's plant to see what type of an operation the supplier ran. On the basis of this visit, he reassured the Purchasing Department "that the man was qualified to do this type of work for us." The Senior Mechanical Engineer also returned to the supplier's plant when the actual keys were first being turned out. The President of the successful supplier visited the organ company in an effort to get their business. A meeting was held in which the supplier President discussed the possible purchase with the Senior Mechanical Engineer, the Director of Purchasing, and a Buyer from the Purchasing Department. The Vice President for Engineering had no personal contact with the first successful supplier, nor did the President, nor the Vice President of Planning, nor the Senior Project Engineer.

Reason for Choice of Supplier

The original supplier was chosen for the following reasons (not necessarily in order of priority):

1. The price quoted by this supplier offered significant savings compared to quotations from other suppliers.
2. The supplier's name was well-known as a result of the supplier's publicity.
3. On the basis of the visit of the Senior Mechanical Engineer, it was consluded that it was a "good quality operation he runs; not a cheap manufacturing process."
4. It was judged that this supplier was willing to try new ideas, which the supplier of implex keys was not.
5. The personal presentation and demeanor of the President of the supplier company originally chosen seems to have been a very important factor in deciding the choice of supplier. Several of those interviewed felt that the personality factor had perhaps been weighted too heavily, to the detriment of other more tangible considerations which was much regretted when this supplier was unable to fulfill his contract as specified.

The second supplier, to whom the job was later given, was chosen primarily because it had done work for the company before and had been found reliable. This supplier was second in line on the bidding. "When trouble arose with (the first supplier), there was no hesitation on my part to ship the mold to them," said the Director of Purchasing.

Summary of Persons Involved in Choice of Supplier:

Top Management	2
Engineering	3
Purchasing	2
Total	7

VI. Sources of Information About Product and Suppliers

The Vice President for Engineering, Engineering Department, spoke with local sales representatives of supplier firms, whom he considered his most valuable source of information. He also consulted publications which had information both on new types of plastics and new techniques in plastic usage (Modern Plastics, Plastics Engineering, American Society for Plastics), obtained information mailed from the Society for Plastic Engineering about materials, and drew on his past experience with plastics suppliers.

The Senior Mechanical Engineer, Engineering Department, got relevant information from visits by local sales representatives of suppliers whom he had asked to call. He consulted standard reference works including Plastics Encyclopedia; and visited one supplier's plant. He also had relevant previous experience, noting, "I've designed products made of melamine and other products and had very good luck with them for (this company) and other organizations."

The Senior Project Engineer, Engineering Department, got relevant information from the Modern Plastics Encyclopedia, a standard reference work. He also got reports from the Senior Mechanical Engineer and from the Buyer of their contacts with the original supplier. He felt these two men were his most valuable sources of information.

The Director of Purchasing, Purchasing Department, said the Plastics Encyclopedia and his previous experience with vendors were most valuable to him. He got information from the Mechanical Engineer about the capability of various suppliers and their tentative prices, from potential suppliers who told him what could be done with melamine and ways in which it could be used, and from the Buyer. He felt that the suppliers were the most valuable source of information to him.

The Vice President of Planning, Planning Department, obtained relevant information from the Vice President of Engineering and from the Director of Purchasing.

The President said that his sources of information were the Director of Purchasing and the Vice President of Engineering, Engineering Department.

Summary: Number of Persons Who Got Information From Following Sources:

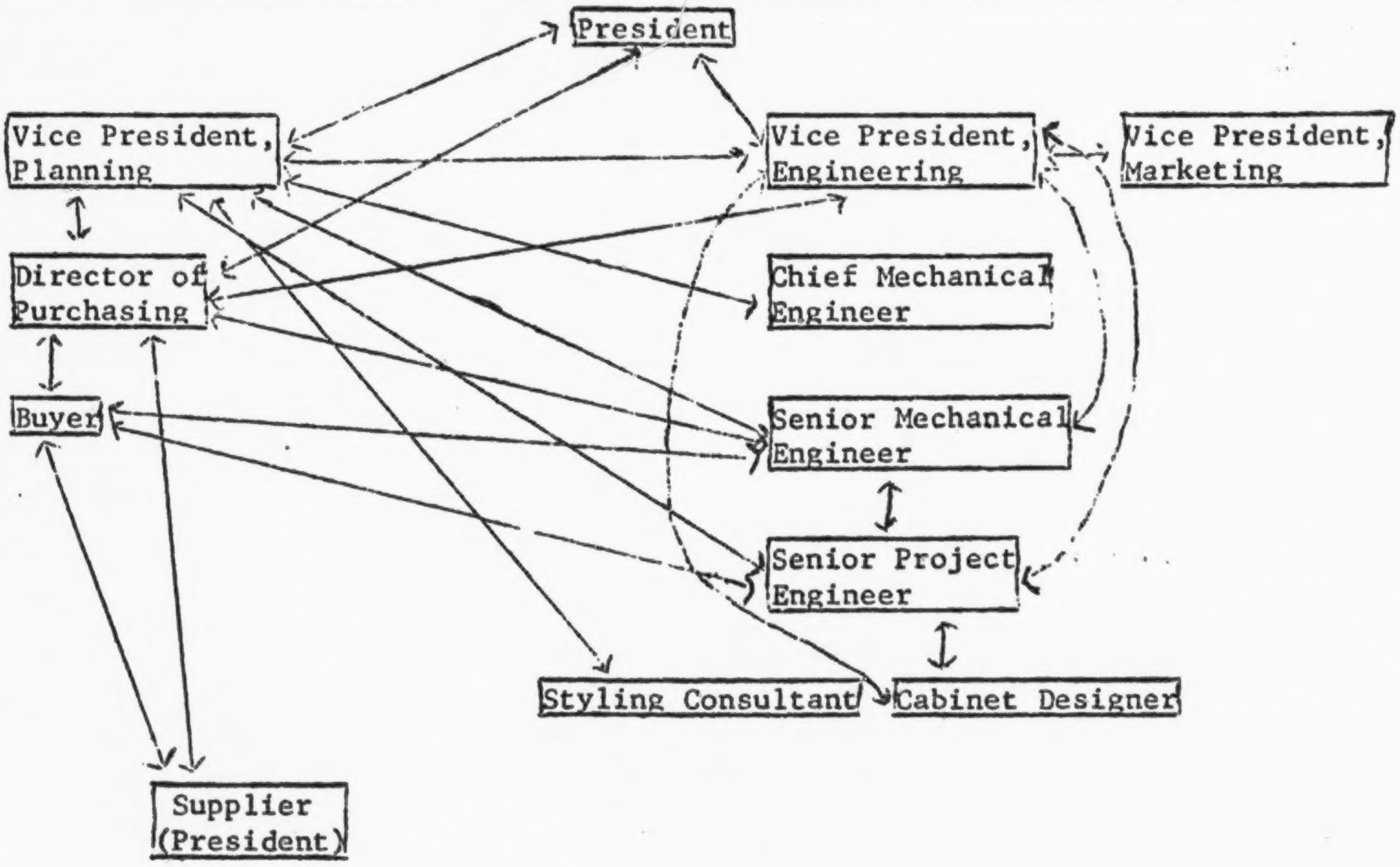
Others in Company	4
Called on by Salesman	3
Got Direct Mail from a Supplier	1
Visited a Supplier	2
Had Previous Experience with this Type of Product or Supplier	3
Used Standard Reference Work	2
Saw Article or Ad in Magazine	1

VII. Satisfaction with Purchase Decision

Asked whether they had felt completely satisfied, fairly satisfied, or not too satisfied about the decision at the time it was made, two of six key respondents said that they had felt "completely satisfied," principally because the melamine samples "were fully approved by Engineering." But four (including two top management men) said they had been only "fairly satisfied" with the decision. Reasons given for lack of complete satisfaction included dislike for the yellowish color of melamine and difficulty with brittleness of the material.

Asked whether, if the decision could be made over again now, they would be in favor of making the same purchase, three respondents said they would be in favor of repeating the purchase, one of these saying, "we don't know how we could have done better, the material has proven satisfactory." But three other respondents, including two top management men, said they would not be in favor of making the same purchase again. Reasons offered included trouble with the quality of work and delivery of the original supplier, the continued need for readjusting keys on the assembly line, and higher-than-anticipated costs. One of these respondents noted, "We may have to change the whole thing yet."

VIII. Diagram of Overall Pattern of Communications Concerning Purchase



Overall Summary of Persons Mentioned as Involved in Purchase:

Top Management	2
Engineering	4
Purchasing	2
Marketing	1
Technical Specialists	2
Total	11

IX. Supplier's Perception of Purchase Decision

Who Took Part in the Decision to Buy Product in This Category

Asked, "Who do you think it was at (purchaser company) who took part in the decision to buy melamine at this time?" the President of the first successful supplier mentioned the Buyer and the Director of Purchasing. He did not mention any of the other persons who were, as described above, involved in the decision to buy the product. Asked the same question, the manufacturing representative of the second successful supplier mentioned only the Director of Purchasing.

Persons at Purchaser Company Involved in Decision to Buy From Particular Supplier Company

The President of the first successful supplier thought that the Senior Mechanical Engineer decided to buy this product from his company rather than from another supplier. However, information obtained from persons at the company indicate that this supplier was chosen primarily through the influence of the Vice President for Engineering, who consulted with the Senior Mechanical Engineer, the Buyer, and the Director of Purchasing.

Purchase Decision Study
Survey Research Center*
University of Michigan

5. CASE STUDY: DECISION TO PURCHASE PLASTIC LAMINATE FOR FURNITURE MANUFACTURE

I. The Purchaser

The purchaser is one division of a large, midwestern-based, nationwide corporation. The entire corporation manufactures over seventy finished and unfinished products in plants spread out across the country. This division manufactures a variety of products including farm implements, plumbing products and hospital furniture.

Each division of the corporation is autonomous in its purchasing. This division employs eleven persons in its purchasing department. It handles all divisional purchasing; none is done at the corporate level.

II. The Purchase Decision

The purchase decision studied was that to buy a plastic laminate for application to a steel bedside cabinet being manufactured by the company for use in hospital rooms. The plastic laminate simulates wood and covers the surfaces of the steel cabinet. For bonding the plastic laminate to the steel, the services of a second supplier were obtained.

III. How Need for Getting Product Came Up

The company had begun the manufacture of hospital furniture by making a bed. It was found, however, that customers wanted a "package deal," which combined several pieces of furniture rather than the single item. Therefore, to meet the demands of the competitive market, the company supplemented the hospital bed by offering two kinds of bedside cabinets: one of plain steel, and one of wood-laminate with a plastic veneer top. The first was company-manufactured and the second was bought as a completed unit from a furniture manufacturer and resold. However, the source that was making the wood-laminate cabinet could not, according to the Buyer of these cabinets in the Purchasing Department, "meet the company's quality line," and the company was having difficulty obtaining a good source of supply. Moreover, the completed cabinets purchased outside were expensive. Their own metal cabinet was not decorative enough to be completely saleable. This situation had been a "perennial problem," according to the Executive Vice President who had been Director of Marketing at the time this became a problem.

In January 1966, the Buyer from the Purchasing Department, whose responsibilities included purchasing the cabinets from an outside source, thought of using a plastic laminate--already being applied in clear form to the company's wood-laminate beds--on the steel components then making up the plain metal cabinet. By applying a wood-appearing plastic to the core metal, he believed, an end product of appropriate quality and price could be assembled to replace the unsatisfactory wood-laminate cabinet.

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*Interviewing for the study was conducted by the National Opinion Research Center. Interviews were conducted in January 1967 with the Buyer, the Director of Purchases, the National Sales Manager for Hospital Products, the Senior Project Engineer--Product Design, the Executive Vice-President, and the Vice-President, Engineering.

The Buyer broached this idea for a cabinet of metal and plastic-laminate to those concerned with sales, manufacturing, and design of the product. These persons included the Director of Marketing; the National Hospital Products Sales Manager, Marketing Department; the Director of Manufacturing; the Vice President of Engineering; and the Senior Project Engineer for Product Design, Engineering Department. Each of these men generally acknowledged the need for a new cabinet and examined the feasibility of the proposal from the point of view of his respective specialty. Further discussion of the need for a new type of cabinet was carried on by the Director of Marketing, who discussed the problem with the Vice President, Engineering, and with the Executive Vice President.

SUMMARY: Persons Involved in Discussion of Need

a.	Top Management	2
b.	Sales	2
c.	Engineering	1
d.	Production	1
e.	Purchasing	1
	Total	7

IV. Deciding to Get a Product in This Category

Though technical and managerial approval was necessary, the decision about whether to go ahead with the new type of cabinet was primarily in the hands of Purchasing and Sales. There were two main issues around which the decision revolved. One was the potential saleability of the proposed plastic-laminate cabinet and the other its likely manufacturing cost. Since the fabricating and bonding of the plastic veneer could not be done at the purchaser company, the Buyer had samples of the wood-simulating laminate on metal made by a supplier with which the company was already dealing. He then submitted these samples to key people in Engineering Design and Sales. Doing this "proved" that the particular supplier could, in fact, laminate the plastic to the metal. (The process was "new" only for the purchaser and the laminator; it had already been done elsewhere.)

It was the task of the Engineering Department to prepare specifications for the cabinet. The Senior Project Engineer, Product Design, made production drawings and determined the engineering feasibility of the proposed cabinet. The Director of Research and Development ran experiments on the new material in order, as the Vice President, Engineering, put it, "to be sure it would do the job." The Chief Inspector, Quality Control, had to evaluate the facilities of the supplier and its "ability to meet specifications." Meanwhile, the

National Sales Manager for Hospital Products consulted his assistant (the Assistant National Sales Manager) as well as two regional sales managers--one in Philadelphia and one in California--to get their reactions to the proposed new type of cabinet. The Marketing Department requested a cost estimate on the new cabinet from the Vice President for Engineering who, in turn, sent a memo asking for such an estimate to the Senior Project Engineer, Machine Design. The Vice President for Engineering also reviewed reports made on the material sent to him by the Director of Research and Development.

Though ultimately the idea for the cabinet was enthusiastically received, people in the company were at first skeptical. According to one respondent "there were negative attitudes, basically from the Sales Department (which) didn't want it at first." In order to "sell" Sales, the Buyer had a sample cabinet constructed and "showed it to the salesmen; after they saw it they were more interested." Those concerned with manufacturing and engineering also had doubts about whether a company-manufacturered cabinet would be desirable. There was a question, the Purchasing Director noted, about "the cost of doing it vs buying the completed unit--as long as it involved manufacturing here, how we were going to do it. This included engineering as well as manufacturing." More factual information about price and the drawings for the new cabinet made up by Design helped to answer the questions raised.

The new cabinet promised a number of important advantages:

a. It was a better quality cabinet than the wood-laminate unit which was being bought from another manufacturer.

b. It enabled the company to control production of its own equipment instead of buying outside and depending on possibly unreliable supply sources. (Controlling production for the new cabinet entails determining color and texture specifications for the supplier of the laminate; providing its own metal components to the laminator; and specifying the kind of fabricating to be done on these components--the cutting, tooling, drilling, and bonding of plastic to the metal component core.)

c. Controlling production, in turn, increased labor at the plant, thus providing for potential expansion of the hospital products "operation."

d. By freeing the company from paying outside overhead on a completed unit, the plastic laminate cabinet reduced manufacturing costs and customer prices.

e. The new cabinet was judged to be a more saleable product than the previous cabinets sold.

The Buyer was, all along, active in trying to get adoption of the new cabinet. As the Senior Project Engineer, Design, put it, "he just pushed it." Having had the job of purchasing the inadequate and expensive completed furniture, and knowing the problems of finding a reliable source for these finished units, he felt that the company's way out of the dilemma was to "do it themselves." Accordingly, he worked hard to get his "project" adopted.
The National Sales Manager, Hospital Products, was influential in the decision-making process because, as he himself put it, "I know what the market will stand." It is part of his job to increase sales and his concern to develop a saleable product. The decision to proceed with the cabinet was technically his, since as Sales Manager for Hospital Products he is "responsible for instigating changes...for all aspects of a product, including appearance, cost, and quality."

Final approval was given by the Vice President, Engineering and the Executive Vice President on the basis of the favorable reports they received from the Engineering and Marketing departments. The Executive Vice President also had received advice from an industrial design consultant.

SUMMARY: Persons Involved in Decision to Get Product in This Category

a.	Top Management	2
b.	Sales	4
c.	Engineering	1
d.	Purchasing	2
e.	Research and Development	1
f.	Quality Control	1
g.	Consultant	1
	Total	12

V. Selecting a Specific Type of Product and a Supplier
Two kinds of suppliers are involved in this purchase. The first is the supplier of the wood-simulating plastic laminate. The other supplier bonds the plastic to the core metal components received from the purchaser. For the plastic laminate itself, the National Sales Manager, Hospital Products, named six companies that were considered as possible suppliers, among them one of the leading suppliers of plastic furniture tops. The purchaser company had done business with this firm in the past, but had had "major problems" according to the Sales Manager for Hospital Products, because the firm didn't meet the purchaser's delivery schedules.

The National Sales Manager for Hospital Products had a major influence in the choice of a plastic laminate supplier because, as the Executive Vice President said, "He has to make the sales and know what the market requires." Also active in the process of choosing a laminate supplier was the

Buyer. Both the Buyer and the National Sales Manager for Hospital Products had contact with a salesman from the company chosen to provide the laminate. The National Sales Manager commented that the salesman "called on us regularly and, when we thought about switching, (he) had the most technical information (and) more sincerity. We visited the plant at his urging and thus knew what they could do." The personality of the supplier salesman was also a factor in the choice of the laminate supplier. "We believed in him," the National Sales Manager said.

The tentative vendor choice raised objections among some salesmen, who thought that it would be better to get the plastic from the better-known source that the company had once used. These men felt that this brand name would "add quality to the product" and make it more saleable. The Sales Manager therefore distributed a questionnaire to twenty salesmen to search out their opinions about whether the previously used brand name would aid sales. Using the responses to this questionnaire "convinced people in the company, I suppose, that the name wouldn't make any difference," he said. Probably because the product "has to be saleable no matter what we recommend," the Buyer attributed to the "salesmen as a group" great influence in the choosing of the plastic laminate vendor.

With regard to a supplier to do the bonding of the plastic laminate to the steel cabinet body, the Buyer seems to have been primarily responsible for selecting this company. He contacted the owner of the company that had been supplying his firm with components for the hospital bed. "Whether it could be done was discussed with Mr. ___________...I phoned and asked if they could laminate plastic to metal--could it be done and could he do it." Although there were other companies which could handle the bonding and fabricating process, the purchaser "was happy with", and"committed to" this one according to the Executive Vice President and didn't consider another. The laminate applier used had been found satisfactory because of the quality of its service, its suitable prices, and regularity of delivery.

A requisition for the laminate application was prepared by the Production Control office, a part of the Manufacturing Department, on November 11, 1966; it was signed by a Production Control Supervisor and the Production Control Manager. Three days later the Buyer signed the purchase order for the services of the laminate applier, and the purchase order was approved by his superior, the Director of Purchasing.

SUMMARY: Persons Involved in Choice of Suppliers

a.	Sales: National Manager; 20 salesmen	21
b.	Top Management	1
c.	Purchasing	2
d.	Production	2
	Total	26

VI. Sources of Information About Product and Suppliers

Asked about the ways in which they got information about the product or about suppliers of the product, people at the company gave the following information:

The Buyer had been dealing with a company that had been supplying them with plastic-veneer wooden bed components, and knew this company's capability. (This is the company which was given the job of bonding the laminate to steel.) He also saw a "competitor's product with similar construction to ours" in a hospital products periodical. The Buyer says that "a combination of seeing ideas, and my own desire to see if we could do it" were his most valuable sources of information about the product.

The Director of Purchases dealt with the buying process indirectly, discussing the purchase with the Buyer and receiving information from the Buyer.

The National Sales Manager for Hospital Products received most of his information through the Purchasing Department. He also received information from his salesmen in the field, from the field manager, from trade publications, and from his own company's Engineering Department. He felt that his most valuable source of information was the Purchasing Department, "because of their understanding of laminates and the furniture business."

The Senior Project Engineer--Product Design said he obtained information about the suppliers from past experience with them. He obtained information about the particular product from the Marketing Department.

The Vice-President--Engineering got information from Research and Development, which conducted experiments on the material to "prove the capability"of the laminated product, and from the Buyer, Purchasing Department, about prices. He felt that his most valuable source of information about the product was the report from the Director of Research and Development which "proves the value of the product...whether this (material) can be used as part of the final product."

The Executive Vice President said that his most valuable sources of information were an industrial design consultant, who had done a survey of the field and recommended improvements, and the Buyer.

SUMMARY: Number (of six persons interviewed) Who Got Information From Following Sources:

a.	Others in Company	5
b.	Called on by a Salesman	1
c.	Visited a Supplier	2
d.	Had Previous Experience with this Type of Product or Supplier of it	2
e.	Saw Article or Ad in Magazine	2
f.	Got Information from Person (consultant) Outside the Company	1
	Total	13

VII. Satisfaction with Purchase Decision

Asked about their satisfaction with the purchase decision at the time it was made, five respondents said they had been "completely satisfied" with the decision and one said he had been "fairly satisfied." Reasons given by respondents for complete satisfaction were: that the company had gained control of the product by manufacturing instead of buying it; that the product filled a "crying need" and solved a "severe sales problem;" that the laminate applier company was familiar and could be depended upon for "exceptional quality;" and that the cabinet passed all tests for looks and price. The respondent who was only fairly satisfied thought that there"was some way a little bit better than using this method. I had some ideas of my own which were overruled."

Asked whether, if the decision could be made over, they would be in favor of making the same purchase, all said yes, except the man who had had some original reservations; he said he was not certain because "the whole laminating process could have been done here." Many of those involved would make the same decision again for the same reasons that they were completely satisfied with it; one man calls the cabinet as a "good investment." Although it had not yet gone into production at the time of these interviews, and had not been marketed, the Buyer mentioned that the product appeared to be more saleable than the previous products and that 400-500 orders for it had already been placed.

SUMMARY: Persons Mentioned as Involved in any Phase of Purchase

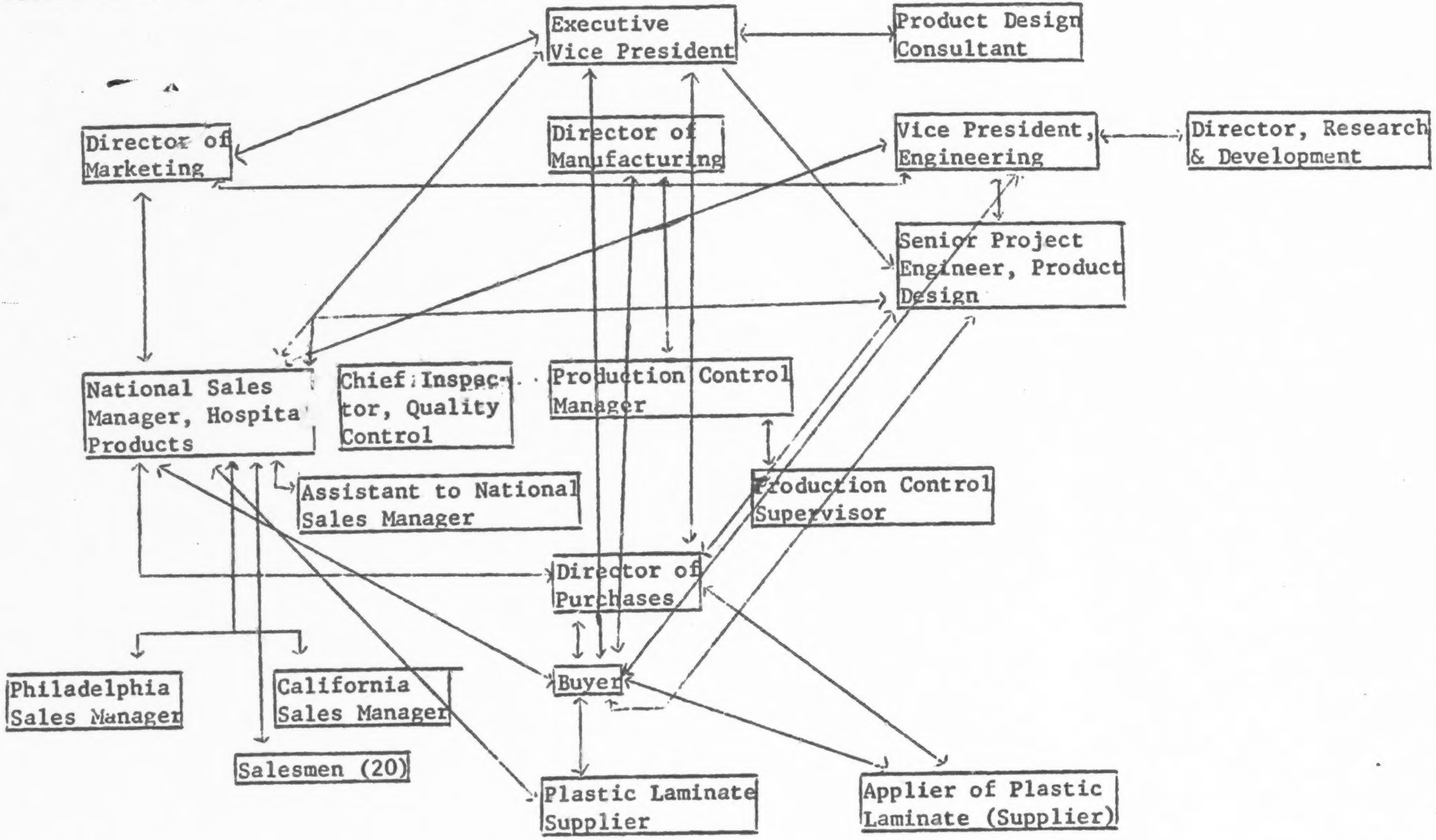
Purchasing:	Buyer, Director of Purchasing	2
Top Management:	Executive Vice President; Vice President, Engineering	2
Production:	Director of Manufacturing	1
Sales:	National Sales Manager, Hospital Products; Director, Marketing; Assistant National Sales Manager, Hospital Products; Two Regional Sales Supervisors; Twenty Salesmen	25
Engineering:	Senior Project Engineer, Product Design	1
Quality Control:	Chief Inspector	1
Research and Development:	Director	1
Production Control:	Manager; Supervisor	2
Other:	Industrial Design Consultant	1
	Total	36

VIII. Suppliers' Perceptions of Purchase Decision

The representative of the company which was chosen to supply the plastic laminate said that he had most contact with the Buyer at the purchaser company. Asked who he thought took part in the decision to buy a plastic laminate, he mentioned the Buyer, Purchasing Department; the Sales Manager for Hospital Products; and the Vice President of Marketing (now Executive Vice President). He did not mention others in the company, including those in Manufacturing and Engineering who had a part in the decision to buy the plastic laminate.

The representative of the company which got the job of applying the plastic laminate to the steel cabinet said that he had most contact with the Buyer and with the Director of Purchases concerning this purchase. Regarding those at the purchaser company involved in the decision to buy this service at this time, he mentioned the Buyer and the "engineering staff," saying that he didn't know who among the latter were involved. He thought that it was the Buyer who decided to buy this service from his company rather than from some other company. In fact, the Buyer appeared to have had the primary role in the choice of this second of two suppliers involved in the purchase.

Pattern of Communications According to the Respondents


Executive Vice President
Product Design Consultant
Director of Marketing
Director of Manufacturing
Vice President, Engineering
Director, Research & Development
Senior Project Engineer, Product Design
National Sales Manager, Hospital Products
Chief Inspector, Quality Control
Production Control Manager
Assistant to National Sales Manager
Production Control Supervisor
Director of Purchases
Philadelphia Sales Manager
California Sales Manager
Buyer
Salesmen (20)
Plastic Laminate Supplier
Applier of Plastic Laminate (Supplier)

6. CASE STUDY: DECISION TO PURCHASE AUTO PART MADE OF ZINC RATHER THAN ALUMINUM

I. Purchaser

The purchaser is a division of a large nation-wide corporation which manufactures many different products, including automotive parts, electrical equipment, motors, and machinery. The division which made this purchase produces automotive parts and has many plants throughout the country. This purchase was made for plants which manufacture shock absorbers.

Each corporate Group (consisting of several divisions) is largely autonomous in its purchasing with the exception of a few cases where national contracts are developed. The "Group" Purchasing Department is responsible for coordinating the purchase functions of plants within the division.

The division offices are in a midwestern city. Of the two plants manufacturing shock absorbers referred to in the study, one is in the south and the second is in a midwestern city other than the city in which corporate and divisional headquarters are located.

II. The Product Obtained

The product purchased is a "heat diffusing" sleeve, a one and one-half inch long strip of zinc which is attached to the middle of an automobile shock absorber produced by the company. The sleeve is advertised as diffusing the heat generated by the shock absorber while the car is in motion. Before this type of heat diffusing sleeve was purchased, another similar one, made of aluminum, was used. However, aluminum was difficult to process in the dies, did not last as long as zinc, and was difficult to procure.

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*Interviewing for this study was done by the National Opinion Research Center, University of Chicago. Five persons in the company who are starred in the communica tions diagram below, as well as a supplier representative, were interviewed in January, 1967; those in the southern plant and the supplier representative were interviewed in April, 1967.

III. How Need For Getting The Product Came Up

The need for a change in the aluminum heat diffusing sleeve was brought to the attention of the purchaser company in April, 1966 by one of its customers. This customer company buys the shock absorbers which the purchaser company manufactures and sells them on the retail market. An Account Executive in the Sales Department was contacted by the customer about an "undesirable condition" in the heat diffusing sleeves of the shock absorbers provided to them. (From other information obtained, this defect appears to have been a lack of durability.)

The Account Executive, Sales, then spoke to the Operations Manager who is the head of the southern plant where the shock absorbers are manufactured. He (the Operations Manager), in turn, spoke to the Director of Purchasing, Automotive Group, about the defective heat diffusing sleeves.

At approximately the same time (April, 1966) the Manager of the Quality Control Department in the shock absorber plant was approached by several of his inspectors who complained that work was slowing down because of fracturing in the heat diffusing sleeves. The Purchasing Manager of the shock absorber division was also informed by "the people in the plant" of the need for a change in the present heat diffusing sleeves. (The Purchasing Manager could name no specific individuals who so informed him, but elsewhere mentions contact with the Operations Manager and with the Buyer at this plant.)

The Manager, Quality Control Department, in the southern plant then consulted with the Product Engineer and with the Resident Engineer (from the division's Engineering Department) about the fracturing of the aluminum heat diffusing sleeves due to the inflexibility of the metal. He also spoke with a Buyer from the division-level purchasing offices about this problem.

Meanwhile, the Director of Purchasing for the Automotive Group, who had been concerned about the problem of getting sufficient aluminum, checked with the Engineering Department* of the shock absorber division and with their two current suppliers of heat diffusing sleeves about obtaining a sufficient supply of aluminum. Apparently, he was unable to obtain sufficient reassurance on this point from the suppliers. According to the Manager of Quality Control, the suppliers were also asked if they could make the sleeves out of something other than aluminum.

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*He didn't remember specifically with whom.

IV. Deciding to Switch To Zinc

After the problems with the aluminum sleeve had come to the fore, the Director of Purchasing, Automotive Group, arranged a meeting attended by the President of the shock absorber division, by the Account Executive who handles the shock-absorber account, and by a representative of the customer company. The meeting was held in the midwest city where a second shock absorber plant of the division is located.

Discussed at the meeting were the drawbacks involved in using aluminum as the material in heat diffusing sleeves: i.e., that aluminum was difficult to process in the dies, was unable to be easily obtained, and that it often fractured either during or some time after the manufacturing process. The Director of Purchasing, Automotive Group, suggested that another material, such as zinc, be used.

In the discussion that followed, some differences of opinion arose. Three specific things were questioned, the Director of Purchasing recalled. First, would "the alternate material have the same physical potential for the purpose intended?" Secondly, would the southern plant have "the ability to use the part satisfactorily in the production line?" Finally, would the zinc have an unattractive appearance if it were stored for any length of time?

At the request of the Director of Purchasing, the Assistant Director of Engineering and several engineers in the division's Engineering Department made sample heat diffusing sleeves out of zinc. These were tested by several others in the engineering laboratory. The Director of Purchasing then consulted with the Manager of Facilities and Equipment Control (division level) about whether or not the casting dies could be converted if the switch to zinc were made.

The tests results were favorable, and, apparently, converting the dies would present no problem. As the Director of Purchasing put it, "the Engineering Department assured me that the new material would be adequate. I had the new product plated for appearance." With the approval of the representative from the customer company, the Director of Purchasing made the decision to switch from aluminum to zinc as the material for the heat diffusing sleeves.

V. Selecting A Specific Type Of Product And A Supplier

A Buyer, a Purchasing Agent, an Assistant Plant Manager (all three from the midwestern shock absorber plant), a Senior Buyer (from the southern shock absorber plant), and a Buyer (from the division's Purchasing offices), all investigated approximately six different suppliers in order to determine if any could provide an adequate supply of zinc,heat diffusing sleeves and also whether or not the actual part would be satisfactory. The information gathered by these investigations was then given to the Purchasing Manager of the division. He, in turn, spoke to the Director of Purchasing, the Director of Manufacturing of the division, and also to the Operation Manager who is head of the southern shock absorber plant. It became the Operation Manager's job to try out the different heat diffusing sleeves to determine which would be the best one. Working under him were the Manager of Quality Control who was in contact with the Quality Control people from the supplier and who had to insure the "dimensions, quality, and appearance of the part. It had to be exact to the drawings made for it." The divisional Purchasing Manager, who made several trips out to the suppliers under consideration, was also in "continual telephone and letter communication with [the supplier finally chosen], working out tooling arrangements, transfer of tooling, delivery schedules, and securing approval for sample parts." Also in contact with this supplier finally chosen was the Director of Purchasing.

In making the selection of the supplier, the Director of Purchasing utilized the information gathered by those mentioned above and then went on into the final stages of the decision. He spoke with people in the Division's Engineering Department, with the Accountant Executive who handles the account with the customer company, with the Operations Manager of the southern plant, with the President of the division, and with a representative from the customer company. Since there were no objections made to the choice, the Director of Purchasing, with the agreement of the division Purchasing Manager, chose the supplier which had, in the latter's words, the best "quality, price, capacity, ability, and delivery." The Finance Committee* approved the expenditure. A purchase order was signed July 5, 1966, and the first heat diffusing sleeves were delivered August 15, 1966.

VI. Sources Of Information About Product And Suppliers

Asked about the ways in which they got information about the product or about suppliers of it, those interviewed gave the following responses:

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*Made up of two corporate controllers and the President of Division.

The Director of Purchasing, Automotive Group, mentions the Division's Engineering Department and the "sample parts made from new material" (i.e., the sample heat diffusing sleeves made of zinc) as his sources of information about the product. He considered his most valuable information to be that concerning "the supplier's ability to get the part plated and the economics of it."

The Purchasing Manager of the Shock-Absorber Division mentioned his visits to the suppliers; his contacts with suppliers by letter and phone; and information provided him by a Buyer, a Purchasing Agent, and Assistant Plant Manager (all three from midwestern plant) and a Senior Buyer (from the shock absorber plant in the south), as his sources of information. Of these, he considered the Assistant Plant Manager to have been the most important source.

The Operation Manager (head of the southern shock absorber plant) said he received his information from the Director of Purchasing who told him about "price, tooling modifications, time required for such modifications, and the improvement in quality [in the zinc sleeve]." He said he had "no other" source of information.

The Manager of Quality Control (southern shock absorber plant) also said that his "only source" of information came from the Automotive Group Purchasing Offices. "They went to the vendors and asked if they could make the sleeve out of some other material," he said.

The Manager, Facilities and Equipment Control (Division) said that his source of information was "my own knowledge...I have dealt with dies and tools all my life."

All five men interviewed said, in answer to specific probes, that they did not get any information from people outside the company (other than suppliers) and that they did not see any relevant articles or advertisements in any publications.

VII. Satisfaction With Purchase Decision

All five persons interviewed at the purchaser company said that they had been "completely satisfied" with the decision at the time it was made. Three said, in essence, "It solved our problem." One remarked, "It was a definite savings. Everyone was satisfied," and another declared, "My mind was relieved; we could get out of the delivery problems we had experienced."

2

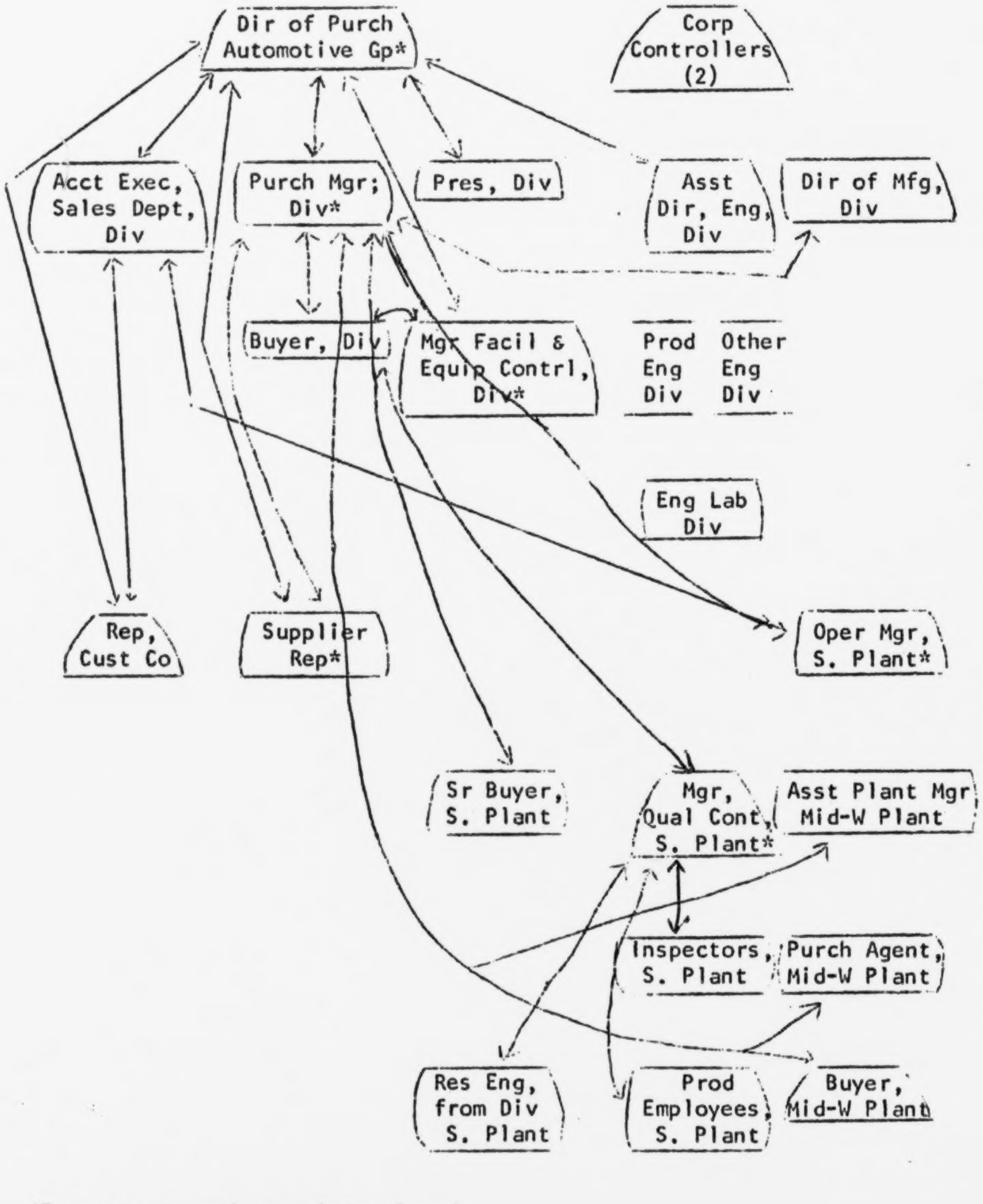
All five respondents said they would favor making the same purchase again if given the chance. When asked why, four again referred to their belief that the problem was solved successfully. The fifth declared, "We finally have enough parts to use in our plants now. [We have] fewer problems and are saving money."

VIII. Persons Mentioned As Involved in Purchase

Top Management: Corporate Controllers (2); President, Division	3
Purchasing: Director of Purchases, Automotive Group; Purchasing Manager, Division; Buyer, Division; Senior Buyer, Southern Plant; Purchasing Agent, midwestern Plant; Buyer, midwestern plant	6
Manufacturing and Quality Control: Director of Manufacturing, Division; Operation Manager, southern plant; Assistant Plant Manager, midwestern plant; other production and quality control persons*	3+
Engineering: Assistant Director of Engineering, Division; Product Engineer, Division; Resident Engineer from division at southern plant; other engineering personnel*	3+
Sales: Account Executive	1
Other: Manager, Facilities and Equipment Control, Division; representative, customer company	2
Total	18+

*Other categories of people mentioned, whose numbers were unspecified, include: a) several other engineers in Engineering Department, Division; b) several persons in Engineering Laboratory, Division; c) inspectors at southern plant; d) production employees at southern plant.

IX. Pattern Of Communications* Concerning Purchase**



*Persons starred were interviewed.

**Since no organizational charts could be obtained, the organizational relationships shown may not be precisely correct.

X. Supplier's Perception of Purchase Decision

The representative (Vice President) from the supplier lists the corporate Director of Purchasing and the Purchasing Manager of the divisions as the persons with whom he had most contact. Asked who he thought took part in the decision to buy the zinc sleeve, he named only the corporate Director of Purchasing. He also named the Director of Purchasing as the one who decided to buy from his company. (Information from company people indicated that the Director of Purchasing did play a key role in these decisions. They also indicate that he consulted many others.)

The supplier representative thought that the purchaser company had learned of his company when "they bought out a company that we were supplying." Finally, he thought that the purchaser company bought from his company because price and "our record of quality and ability to perform." He commented also that "It was our recommendation to go to zinc. It was mutually agreed upon after discussion with (Purchaser) but I think we suggested or recommended it first."

Purchase Decision Study
Survey Research Center*
University of Michigan

7. CASE STUDY: DECISION TO PURCHASE CONVEYOR CROSS-RODS MADE OF A NEW TYPE OF STEEL

I. Purchaser

The purchaser is an engineering plant of a larger company which has branches throughout the country. This plant operates as a "job shop" and makes primarily moving equipment (e.g.,coil conveyers for handling steel in a steel mill) and processing materials (e.g., machanizing a foundry.) Each plant of the larger corporation functions independently with respect to purchases.

II. The Products Obtained

The products purchased are round bars of a strong steel which come in nine different diameters and are used as a cross-rod or axle in apron conveyors being manufactured by the plant. The cross-rods maintain spacing and alignment of double strands of chain. The rods are placed at certain widths, bolt the chains together, support and separate them, and keep them parallel. Before the purchase the company used carbon steel and heat-treated it to harden the ends. However, heat-treating caused warping of the bars and excessive hardening, thus precluding further work until the bars were straightened.

III. Deciding To Get The Product

The need for stres-proof bars had existed for many years because of the "extra" heating and straightening operation required with the carbon steel bars. The Plant Metallurgist discussed this problem with the General Superintendentof Manufacturing in early 1965 (as the latter recalled the time.) The General Superintendent, Manufacturing, in turn discussed the problem with the top executive of the plant, the General Plant Manager. Both the Metallurgist and the General Plant Manager left the company shortly after these conversations, with the Metallurgist not being immediately replaced.

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*Interviewing for this study was conducted by the National Opinion Research Center, University of Chicago. Interviews were conducted with those persons who are starred in the communications diagram, below, and with a representative of the supplier company.

The Purchasing Agent, who happens to have a background in metallurgy, knew of this problem. He regularly receives literature from the sales representative of a particular supplier, who calls every few weeks. When, in October 1965, he saw in this literature an announcement of the new type of steel, he recognized this product as a possible replacement for carbon steel in the cross-rods.

The Purchasing Agent, who feels that "this was pretty much my baby all the way," initiated in November, 1965 a series of discussions which eventually included persons in Engineering, Manufacturing and Accounting, as well as the General Plant Manager. At a meeting whose participants included the Superintendent of Industrial Engineering, the Superintendent of the Machine Shop and the Purchasing Agent, the possible advantages and disadvantages of the new steel were discussed. Engineering was concerned principally with the strength of the new steel as compared to the carbon steel, the Machine Shop with whether it would machine as well. It was also pointed out at this meeting that the Shop would have to "route it differently"--i.e.,adjust operations for only one step since the heat-treating procedure would be eliminated by using the new steel. The Superintendent of the Machine Shop indicated that such a meeting was"a requirement; it's a combined effort between engineers, shop, and purchasing." The Machine Shop did not have the right to say "no" to the idea, but were simply consulted for opinions. The actual decision was up to Engineering and Purchasing.

Other personnel who discussed the possible use of the new steel for cross-rods with the Purchasing Agent were a Divisional Products Engineer, an Industrial Engineer who directs time and motion study in the Machine Shop, and the Engineering Coordinator, Divisional Engineering. The latter also discussed the matter with the Superintendent of the Machine Shop and with the Superintendent of Industrial Engineering. (The Chief Engineer, Engineering, mentioned by one person as influential in the decision because "he was looking for a product to do a better job," also appears to have participated in these discussions, though he is not specifically mentioned by respondents.)

The Purchasing Agent also consulted with the Chief Inspector of the Machine Shop, who checks for "qulaity control" of products, and with the Supervisor of Standard Costs in the Accounting Department. The Supervisor of Standard Costs ascertained that the new steel would be cheaper and communicated this to the Purchasing Agent. The Chief of Inventory Control also discussed the matter with the Purchasing Agent, especially with regard to whether theplant should carry both the new and old types of steel. (The decision was to carry only the new type.)

The top executive of the plant, the General Plant Manager, also discussed the matter with the Purchasing Agent, after the latter had sent copies of the literature on the new steel to him, explaining its advantages of reducing costs and of eliminating heat-treating. In addition, the General Superintendent for Manufacturing discussed the possible use of the new steel with the Products Engineer and with the latter's subordinate, the Design Engineer, who "made drawings" for the new use of the new material.

There appear to have been no substantial differences of opinion about the desirability of making the purchase. The Chief of Inventory Control does note an initial difference of opinion based on the question of possible increase in cost and in inventory. The question was resolved by determining that the actual cost increase of the new stronger steel would be offset by not having to heat-treat the new product, and by deciding to carry only the newer bars so that there would be no increases in inventory.

Most respondents felt that the Purchasing Agent had the greatest influence on the decision to get this product. This influence appeared to be based on his knowledge of the product. As the Divisional Products Engineer put it, "He had a very good grasp of the problem and the costs involved." However, while the Purchasing Agent agreed that he was the single most influential person "because I have a metallurgical background and they listen to me pretty well," he also noted that the final decision was up to Purchasing and Engineering together. The Chief Engineer's influence was based on the fact that "he was looking for a product to do a better job," the General Superintendent of Manufacturing said. The Superintendent of Industrial Engineering indicated that "No one had the final say so on it... All three decisions (Engineering, Purchasing, Manufacturing) were favorable."

The favorable decision was based on the fact that, though the new better quality steel was more expensive, that increase was offset by elimination the costs of heating and straightening the cross-rod bars. The savings to the company was estimated at about $2,000 for the initial order. Moreover, production problems caused by the warpage of the previous bars were eliminated.

Supplier. Only one supplier was considered for this purchase--i.e., the one which had given its literature to the Purchasing Agent. The specific type of steel in question is produced only by this manufacturer, which has a patent on the product (which carries a trade name.) However, according to an informant at the supplier, other manufacturers "have tried to imitate" this product.

In June, 1966 when the company had run out of a particular diameter (9/16 inch) cross-bar, the Purchasing Agent wrote to the Order Department requesting that three tons of the new type of bar be ordered in this diameter. In August, 1966, corss-rod bars of 7/8 inch diameter were changed to the new material. In October, 1966, 1 1/2 inch bars were changed. As stocks of other diameter bars are exhausted, these will also be changed to the new type of steel.

VIV. Sources Of Information About the Product and Suppliers:

The Purchasing Agent got information about the product from literature put out by the supplier, and he felt this literature supplied him with the information he needed to know that this was the product he was looking for.

The Divisional Products Engineer was informed about the availability of the new steel by the Purchasing Agent, and he verified its hardness and machineability rating in what he termed his "Central Steel and Wire Book,"* which he thought his most valuable source of information.

The Superintendent of Industrial Engineering was told by the Purchasing Agent about the general properties and machineability of the product, and also saw general information about it in a trade magazine (not specified.) He thought the Purchasing Agent was the most valuable source of information because "he has all the contacts."

The Superintendent of the Machine Shop got cost and tooling information from the Purchasing Agent, whom he judged his most valuable source of information. He commented, "I never knew they did apply (this type of) steel to cross rods."

The Chief Shop Inspector said he got information through brochures and the salesman. He also mentioned having seen an advertisement in Steel magazine--which showed "interesting products for probable use in our applications."

The Supervisor of Standard Costs, Accounting Department, was consulted about the product by the Purchasing Agent and he saw information about it in periodicals sent out by the manufacturer. He thought this literature--the same that the Purchasing Agent had orginially seen--to be the most valuable source of information for him.

The Engineering Coordinator was informed about the materials and specifications of the product by the Purchasing Agent, whom he deemed his most valuable source of information since, he said, the Purchasing Agent had contacted metallurgists at various steel companies.

The Chief of Inventory Control saw the same manufacturer's literature that the Purchasing Agent had obtained and also spoke with the supplier representative.

The General Superintendent of Manufacturing picked up information through the Plant Metallurgist, and also saw an advertisment in Mill End Factory magazine which "mentioned the advantages of the product such as cost reduction, added strength, and durability." He judged the information from the Metallurgist to be most valuable to him.

The Industrial Engineer got information from the Purchasing Agent, and had no other source.

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*No such title was listed in library sources.

Summary: Number Of Persons (Of Ten Interviewed) Who Got Information From Following Sources:

Others in company	8
Persons outside company	1
Saw material from supplier	4
Used standard reference work	1
Saw article or ad in magazine	3

V. Summary Of Persons Mentioned As Involved In Purchase*

Top (Plant) Management: General Plant Manager; former General Plant Manager	2
Manufacturing: General Superintendent; Superintendent, Machine Shop; Chief Inspector, Machine Shop; Chief, Inventory Control	4
Engineering: Chief Engineer; Engineering Coordinator; Products Engineer; Design Engineer	4
Industrial Engineering: Superintendent; Industrial Engineer	2
Accounting: Supervisor, Standard Costs	1
Purchasing: Purchasing Agent	1
Technical Specialist: Metallurgist	1
Total	15

VI. Satisfaction With Purchase Decision

Respondents were unanimous in saying they had been "completely satisfied" with the purchase decision at the time it was made and that they would make the same decision again if the decision were to be made over again. Reasons given included the fact that the new steel fulfilled the metallurgical requirements for eliminating heating and straightening of the bars, that there was a cost savings involved, and that the purchase simlified storage by reducing the needed inventory. The process of decision-making itself was also alluded to by one respondent who said, "Because we mutually investigated it to our satisfaction."

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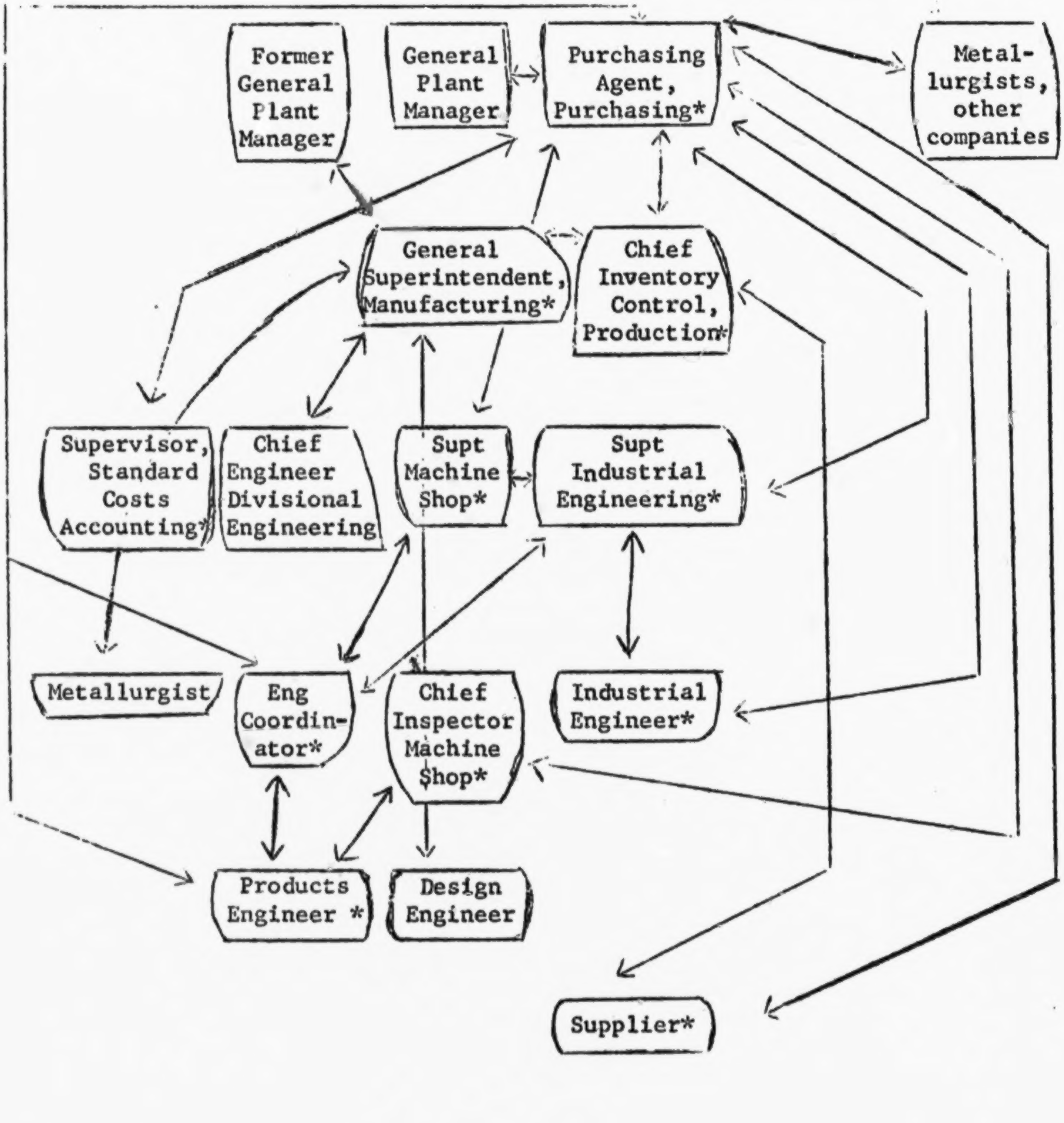
*Also, unspecified number of metallurgists at several steel companies (consulted by Purchasing Agent, according to Engineering coordinator.)

VII. Overall Pattern Of Communications* Concerning Purchase**


Former General Plant Manager
General Plant Manager
Purchasing Agent, Purchasing*
Metal-lurgists, other companies
General Superintendent, Manufacturing*
Chief Inventory Control, Production*
Supervisor, Standard Costs Accounting*
Chief Engineer Divisional Engineering
Supt Machine Shop*
Supt Industrial Engineering*
Metallurgist
Eng Coordinator*
Chief Inspector Machine Shop*
Industrial Engineer*
Products Engineer *
Design Engineer
Supplier*

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*Persons starred were interviewed about the purchase.

**Since no organizational chart was available for this plant, organizational relationships shown may not be precisely correct.

VIII. Supplier's Perception Of Purchase Decision

At the supplier company, the sales representative, who was the person most involved in this purchase, could not be reached for interviewing. Instead, the Sales Correspondent who processed and expedited the order was interviewed. This man said that he had had contact with the Purchasing Agent at the supplier company concerning this purchase.

Asked who he thought took part in the decision to buy the product, the Sales Correspondent named the Purchasing Agent, adding, "I would assume that he consulted their metallurgist." He thought that the purchaser company knew about the supplier's products through their sales representative. "They have been doing business with us for a number of years. Our salesman calls on them every three weeks. He passes out literature and gives a presentation of our products--in other words, a 'sales pitch.'"

Asked who he thought decided to buy the product from his company, rather from another supplier, the supplier man again named the Purchasing Agent and added, "We have a patent on this product." He noted, though, that "other companies have tried to imitate our product."

Purchase Decision Study
Survey Research Center*
University of Michigan

8. CASE STUDY: DECISION TO PURCHASE A COOLANT FOR CUTTING TOOLS

I. The Purchaser

The purchaser is one of four divisions of a large Midwestern corporation. The division manufactures a variety of types of presses, including commercial offset, letterpress, letterset, gravure, and flexographic types, as well as carton-making equipment. Purchasing is handled by the division itself, except for purchases over $50,000 (capital expenditures) which must be approved at a corporate level. The Purchasing Department for the division employs a total of thirteen persons.

II. The Product Obtained

The product purchased is a water soluble liquid with a 10% oil base. It is used as a cooling agent to extend the life of cutting tools in machines manufacturing printing presses and carton equipment and to maintain the correct size of particular tools (i.e., decreasing the amount of expansion). It is also used to accelerate the grinding and cutting of metals. Before this product was purchased, another more expensive cooling agent was used.

A 55 gallon drum of this product was initially purchased for testing in the Machine Shop and a final decision concerning whether or not the company will convert to using this coolant on a permanent basis has yet to be made. If the conversion is made, the company estimates it would use approximately 10 drums per month.

III. How Need for Getting Product Came Up

In January, 1966, a Sales Engineer from a supplier contacted the Superintendent of the Machine Shop. He claimed that his cooling agent was superior to others in use and wished to supply some for the company. His offer was not taken. Then in September, 1966, he contacted a Buyer in Purchasing and wanted to arrange for a test of his product, comparing it with the one in use by the company. The Buyer mentioned this to the General Foreman of the Machine Shop who in turn talked to the Turret Lathe Supervisor, also in the Machine Shop. Having found some interest in the new product, the Buyer from Purchasing and the Sales Engineer from the supplier together visited the Machine Shop in about October , 1966, to tell people there more about the coolant and to discuss further the possibility of a test.

Summary: Persons Involved in Discussion of Need

Purchasing	1
Production	5
Total	6

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*Interviewing was conducted by the National Opinion Research Center. Interviews were conducted in January 1967 with the persons starred on the communications diagram, below.

IV. Deciding to Get a Product in this Category

The Buyer from Purchasing talked with the Tool Application Engineer, the Superintendent, the General Foreman, and the Turret Lathe Supervisor, all of the Machine Shop, about whether or not to purchase a small amount of the cooling agent for testing. The Turret Lathe Foreman, the Lathe Supervisor, the Gear Foreman, and the Milling Foreman were all consulted and asked about having the product put in one of the machines in each of their respective areas of the Machine Shop. About twelve to fifteen operators were also consulted about putting the product into their machines because,as the General Foreman put it, "In making a test like this, we have to sell the machinist on the idea of making the change. He has to be shown that it's as advantageous to him as it is to the company."

However, the Tool Application Engineer and the General Foreman, both of the Machine Shop, stated that there were some differences of opinion about the desirability of testing a new cooling agent. The Tool Application Engineer indicated that health hazards and machine rusting which might result from using the new coolant were raised as objections. These objections were answered by getting further facts and a warranty from the manufacturer. There were also objections raised by some foremen who felt that their current cooling agent was a good product. There was, further, the feeling by some that the factory line supervisors would have extra work running the test, and that if the new product did not prove useful there would be the loss of the production hours spent in making the test.

Although these various objections were raised, general opinion after discussion within the Machine Shop was for making the tests of the new coolant. The most important reason behind the decision to test the new cooling agent was the fact that the cost per gallon was less than the cost of their current product. It was also thought that the new product would be more effective. With regard to the possibility of greater effectiveness, the Superintendent of the Machine Shop commented, "We are always open for new innovations and new products that will help our operations." The Superintendent of the Machine Shop, with the advice of the General Foreman (also of the Machine Shop), made the actual decision to test the new cooling agent.The Buyer in Purchasing agreed to make the necessary purchase. At the Buyer's recommendation, the Director of Purchasing signed the purchase order on November 1, 1966, and the first shipment of the new cooling agent was received the same month.

It should be noted that the final decision concerning whether or not the company will continue to use this product on a permanent basis has yet to be made. However, the cooling agent did achieve very favorable results in most of the tests conducted. Specifically, it increased the life of the cutting tools, and it is less expensive to purchase than the old cooling solution. The Superintendent and the General Foreman (both of the Machine Shop) felt strongly that the company would continue to use the new coolant. In fact, the Lathe Foreman, who had kept a weekly record on the use of the new coolant, was so impressed with the product's performance that he spoke to the Buyer in Purchasing and placed an order for several additional drums.

An exception to the generally favorable test results occurred with respect to the automatic turret lathe machines. For these machines, three operators found the new coolant became contaminated with other substances and also had an odor. Because of these machine operator complaints, which were considered "justifiable" by the General Foreman, the coolant is being used on all machines except the automatic turret lathe machines.

Others involved in evaluating the coolant's performance were the Turret Lathe Supervisor of the Machine Shop, who supervised the test with the machine tools on a daily basis ; two supervisors also of the Machine Shop (and not previously mentioned in this report), who were consulted by the Lathe Foreman ; and finally the approximately fourteen machine operators who were asked their opinions of the coolant's performance. Also involved in discussing the possible switch to a new coolant were a Gear Foreman, Machine Shop (consulted by the Tool Application Engineer), and another General Foreman, Machine Shop (who has not been previously mentioned in this report and who was consulted by the Superintendent of the Machine Shop).

Summary: Persons Involved in Decision to Get Product

Purchasing	2
Production, Supervisory	11
Production, Non-Supervisory	14
Total	27

V. Choice of Supplier

Suppliers Considered

A number of different suppliers make coolants of the type purchased. However, only one supplier was considered--i.e., the supplier who had contacted the company about its product.

Contacts with Successful Suppliers

The Buyer and the Lathe Foreman were the two closest contacts for the Sales Engineer from the supplier, according to his own report. The supplier representative indicates that he spent about an equal amount of time with each. The supplier representative also had early contact with the Superintendent of the Machine Shop.

VI. Sources of Information about Product

Asked about ways in which they obtained information about coolants or about suppliers of this kind of product, the people involved in this purchase indicated very limited outside sources of information. The Buyer, Purchasing Department, mentioned getting information only from the one supplier who contacted him and who explained in detail the advantages of using his product. The Superintendent of the Machine Shop had also been contacted earlier by this supplier. Others in the Machine Shop (the General Foreman, the Lathe Foreman, the Tool Application Engineer, the Turret Lathe Foreman), as well as the Director of Purchasing all learned about this new coolant from the Buyer. Several Machine Shop supervisors (the Turret Lathe Supervisor, the General Foreman, and the Lathe Foreman) felt that their most valuable source of information was the actual results of testing the new product. Neither those in Purchasing nor those in production appeared to have obtained information about other coolants or other suppliers of coolants.

VII. Satisfaction with the Purchase Decision

Asked about their satisfaction with the decision at the time it was made, one man (in the Machine Shop) said that he had been "not too satisfied" while three said they had been "fairly satisfied" and two were "completely satisfied." The man who was not too satisfied with the decision felt that the product which the company was currently using was satisfactory. Of those who were only fairly satisfied with the decision, one stated that because the new coolant works only on certain machines, it is not completely acceptable to him. The other two felt that since the new product was being tested on a trial basis, they could only be completely satisfied with it when the tests were finished. Finally, the three who stated they were completely satisfied cited the way in which the test was set up (i.e., how the men who are using the coolant were persuaded to try it), and one of the specific features of the coolant (i.e., that chips no longer stick to the machines the coolant is used in) to indicate why they felt this way.

Asked whether "if this decision could be made over again now" they would be in favor of making the same purchase, only the Machine Shop man, originally not too satisfied with the decision, indicated reservations about this, saying he was not sure. He said this was because the product was still being tested. All others answering this question indicated that they would be in favor of making the same purchase again. Reasons given include the performance of the product in the tests, the lower cost of the new coolant, its effect in producing longer tool life, and its aid in keeping the machines cleaner. Other reasons given include the desirability of "keeping abreast of new improvements in tooling coolants" and "remaining open for trying new products."

Overall Summary of Persons Involved in Any Phase of Purchase

Production, Supervisory		11
Production, Non-Supervisory		14
Purchasing		2
	Total	27

VIII. Supplier's Perception of Purchase Decision

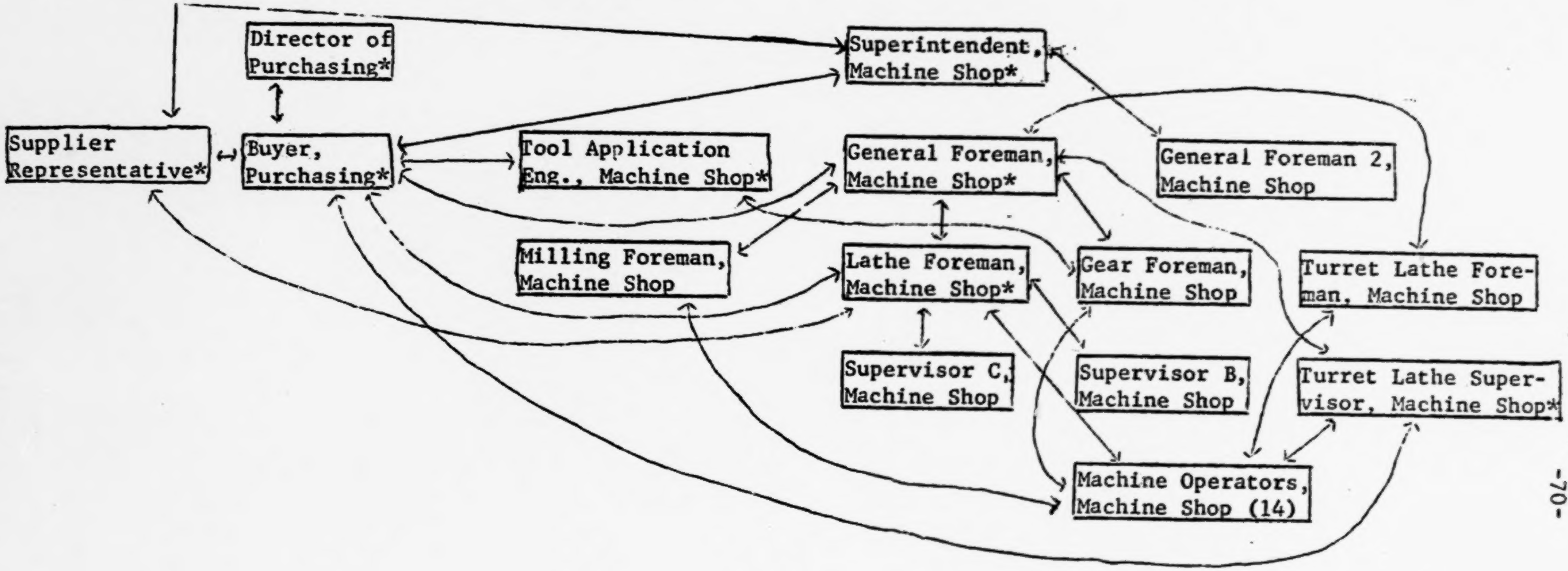
Who Took Part in the Decision to Buy Product in this Category

Asked who he thought it was who took part in the decision to buy the new coolant, the supplier's representative (sales Engineer) mentioned the Turret Lathe Supervisor, the Lathe Foreman, and the General Foreman (all of the Machine Shop) and the Buyer in Purchasing as those involved in deciding to test the cooling agent. These people were all principals in making the decision, although many other people were also involved.

Reasons for Decision to Buy From Particular Supplier

The Sales Engineer from the supplier lists better grinding, better cleaning, better rust protection and a lower purchase price as the reasons why the purchaser company decided to test his product. His perception corresponds generally to information given by those at the company.

IX. Overall Pattern of Communications About Purchase *


Director of Purchasing*
Superintendent, Machine Shop*
Supplier Representative*
Buyer, Purchasing*
Tool Application Eng., Machine Shop*
General Foreman, Machine Shop*
General Foreman 2, Machine Shop
Milling Foreman, Machine Shop
Lathe Foreman, Machine Shop*
Gear Foreman, Machine Shop
Turret Lathe Foreman, Machine Shop
Supervisor C, Machine Shop
Supervisor B, Machine Shop
Turret Lathe Supervisor, Machine Shop*
Machine Operators, Machine Shop (14)

*Indicates this person was interviewed.

Purchase Decision Study
Survey Research Center*
University of Michigan

9. CASE STUDY: DECISION TO PURCHASE RUBBER COMPONENT FOR MACHINE PRODUCED

I. Purchaser

The purchaser is one of four divisions of a large midwestern corporation. This division manufactures a variety of types of printing presses as well as carton-making equipment. Purchasing is handled by the division itself, except for purchases over $50,000 (capital expenditures) which must be approved at a corporate level. The Purchasing Department for the division employs a total of 13 persons.

II. The Product Obtained

The product purchased is a tire that fits into the grooves on a "barb drum" in a cutting and creasing machine previously produced by the company. The tires are now furnished to customers as "repair items." About twelve such tires are used on each machine. As cardboard passes through the cutter and creaser, the drum turns around, stripping off the excess material. The tire itself is a means of supporting the cardboard during its passage through the machine. The new barb drum tires are made of a synthetic rubber, neoprene, which has a hole in it through which a cable passes and is cemented in the hole. Immediately prior to this purchase the tires purchased were made of polyurethane. Prior to that the tires purchased were made of neoprene--i.e. the same material now purchased. However, previously the neoprene had been molded around the cable rather than being made with a hole for the cable.

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*Interviewing for this study was conducted by the Nation Opinion Research Center, University of Chicago. Persons interviewed for this case were: in the Engineering Department, the Chief Engineer and a Project Leader; in the Manufacturing Department, the Manufacturing Engineer and the Methods Clerk; and in the Purchasing Department, the Purchasing Director and the Assistant Purchasing Director.

III. How Need For Getting Product Came Up

Problems with the barb drum tires dated back at least to early 1964. At that time, as the Chief Engineer, Engineering Department explained, the company had been using a synthetic rubber (neoprene) tire which was molded around a wire cable which goes through the center of the tire. However, the tire being purchased was costly and the quality was poor--i.e., the wire cable would not stay in position and often there would be air bubbles in the neoprene. These was also a serious difficulty with respect to delivery--the supplier often could not supply the tires when the purchaser needed them. Of the original delivery problem, the Assistant Purchasing Agent said, "It was strictly a time element that urged us to pursue other methods of manufactures." The Assistant Purchasing Agent discussed the problem with the Purchasing Director. Along with a Project Leader (a Mechanical Engineer) from the Engineering Department, the Assistant Purchasing Agent also discussed the delivery problems with the Chief Engineer.

In mid-1964, the company switched to the use of polyurethane for the barb-drum tires, the switch in materials being accompanied by a switch in suppliers. However, polyurethane was also characterized by quality problems. This tire, said the Chief Engineer, "could not hold its size" and the air bubbles couldn't be removed. The Chief Engineer said also that the Manager of the Large Press Service Department "informed me of the premature wear of the polyurethane tires."

IV. Deciding To Change Materials

The Chief Engineer who, as he said, is "responsible for the selection of materials," proposed the possibility of changing from polyurethane to extruded neoprene--i.e. neoprene with a hole into which the necessary cable could be cemented. To evaluate the feasibility of this approach, tests were made by the foreman of the Heat Treating Department. The purpose of the tests was to see if a hole could be extruded in the neoprene and a cable cemented in it.

The Methods Clerk, Manufacturing Engineering Department, and the Manufacturing Engineer, his superior, were responsible for evaluating the results of the tests. The Methods Clerk described his role as follows: "I had to follow the thing through and decide whether it was feasible to manufacture it and see that it performed the job it was designed for; also whether it was economical." The Manufacturing Engineer clarified the testing process, explaining, "we reviewed it as to whether we could insert the cable into the rubber, whether it was practical. It was our responsibility to establish the time required to perform the operation. That's our basic function--to provide...methods of manufacturing and tooling and also establish tire standards for our incentive system...we determine how this new material is going to be processed in our plant, whether we have the facilities to handle it, and whether it's cheaper to make or buy."

Both the Manufacturing Engineer and the Methods Clerk discussed the tests with the Chief Engineer, with the Assistant Purchasing Agent, and with the Foreman of the Heat Treating Department, in whose department the tests were made. The Methods Clerk stated that the cement for fixing the cable in the neoprene was toxic and also that it had a tendency to shrink as the neoprene cured. But, he added, "after talking it over we decided that it was not harmful. We resolved the possibility of shrinkage just by trying it out."

A number of persons were influential in the decision to switch from polyurethane to extruded rubber. The Chief Engineer noted his own influence in the process, saying "It was a technical decision." The Purchasing Director also pointed to the Chief Engineer's influence saying, "Engineering has to approve of all designs and products used." However the Manufacturing Engineer noted that although the Chief Engineer had to accept the design and material "if we [Manufacturing Engineering Department] didn't have the facilities or abilities, there could have been no decision for (the Chief Engineer) to make."

The Manufacturing Engineer thought that the decision "was a joint affair--me and (Methods Clerk) and (Chief Engineer.)" Several persons also mentioned the Assistant Purchasing Agent as influential. He himself noted, "I'm responsible to obtain the product." The Project Leader, Engineering Department, also mentioned the Assistant Purchasing Director as influential in the decision "because he couldn't buy it as it was designed "--evidently referring to the original problem of obtaining the molded neoprene tires. Approval for the purchase was also obtained from the Product Control Supervisor, Manufacturing Department, although the Purchasing Director indicates that his approval was largely a formality.

V. Selecting A Supplier

Once it was decided to change the material and design of the barb drum tires from polyurethane to extruded neoprene, three suppliers were considered. The one finally chosen was selected because, as the Assistant Purchasing Agent expressed it, "Their quotation indicated they could furnish the product desired to meet our engineering and delivery requirements at the most economical price. This company met all three requirements--time, quality, and price."

In selecting this supplier, the Assistant Purchasing Agent spoke to the Chief Engineer, who had previously determined the specific type of barb drum tire needed by the company, and also to the Director of Purchasing. Most respondents interviewed felt that it was a combination of the Assistant Purchasing Agent and the Chief Engineer who had had the most influence on selecting the specific supplier. It was the Assistnat Purchasing Agent who made all the contacts with the supplier's representative, although the Methods Clerk, Manufacturing Department, did speak to the supplier representative once about whether his company could actually make the specific barb drum tire needed. A purchase order for the tires for the supplier selected was signed in March, 1966, subject to approval on the submission of samples.

VI. Sources Of Information

The Chief Engineer said that suppliers were identified for him by the Purchasing Department but that his decision to switch to extruded neoprene was based on his own knowledge that the successful supplier manufactures neoprene parts. "For this particular decision, we relied on (Assistant Purchasing Agent) but generally we read a lot of trade journals and reference material," he said. He mentioned specifically Materials Engineering,* a "specialty in Engineering." Asked what source of information was most valuable to him, the Chief Engineer named the Assistant Purchasing Director, saying "He had the time to find the sources of supplies for us."

The Assistant Purchasing Director said that several rubber extruders were consulted to "research their capabilities" and to get quotations. He mentioned the salesman from the successful supplier as providing him with the information that "they could product the tire to meet our requirements, providing we could accept their standard manufacturing tolerances." He also received by mail what he termed an "unsatisfactory quotation" from another supplier and got information from the Chief Engineer who, he said, suggested possible acceptable design changes. He felt that his most valuable source of information was the successful bidder. "They were the only ones who came forth with engineering assistance," he said.

Other persons involved in the purchase had little in the way of additional sources of information about the product or suppliers. The Purchasing Director mentioned the Assistant Purchasing Director, "working with the Chief Engineer," as his source of information, saying the information from Engineering was most valuable because "we have to have their idea of what can be used."

The Project Leader, Engineering, said he "got all this through (the Chief Engineer)...He did a thorough investigation and submitted his findings to me." Both the Manufacturing Engineer and the Methods Clerk indicated that they had relied on the Purchasing Department for information about the product and suppliers. The Methods Clerk indicated, however, that he had obtained information from the supplier when they "came in" saying, "we had to discuss what limits they could hold in extruding the shape."

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*Respondent probably was referring to Materials Handling Engineering.

VII. Satisfaction With Purchase Decision

Of the six respondents interviewed, four said they had been "completely satisfied," one "fairly satisfied" and another "not too satisfied" with the purchase decision at the time the decision was made. Reasons given by those who were completely satisfied include" dissatisfaction with the previously used polyurethane, the lower price obtained for new type of barb drum tire, and the ability of the new supplier to provide tires when needed. The Director of Purchasing commented in explaining his complete satisfaction, "I have great faith in the Chief Engineer's analysis approach and decision."

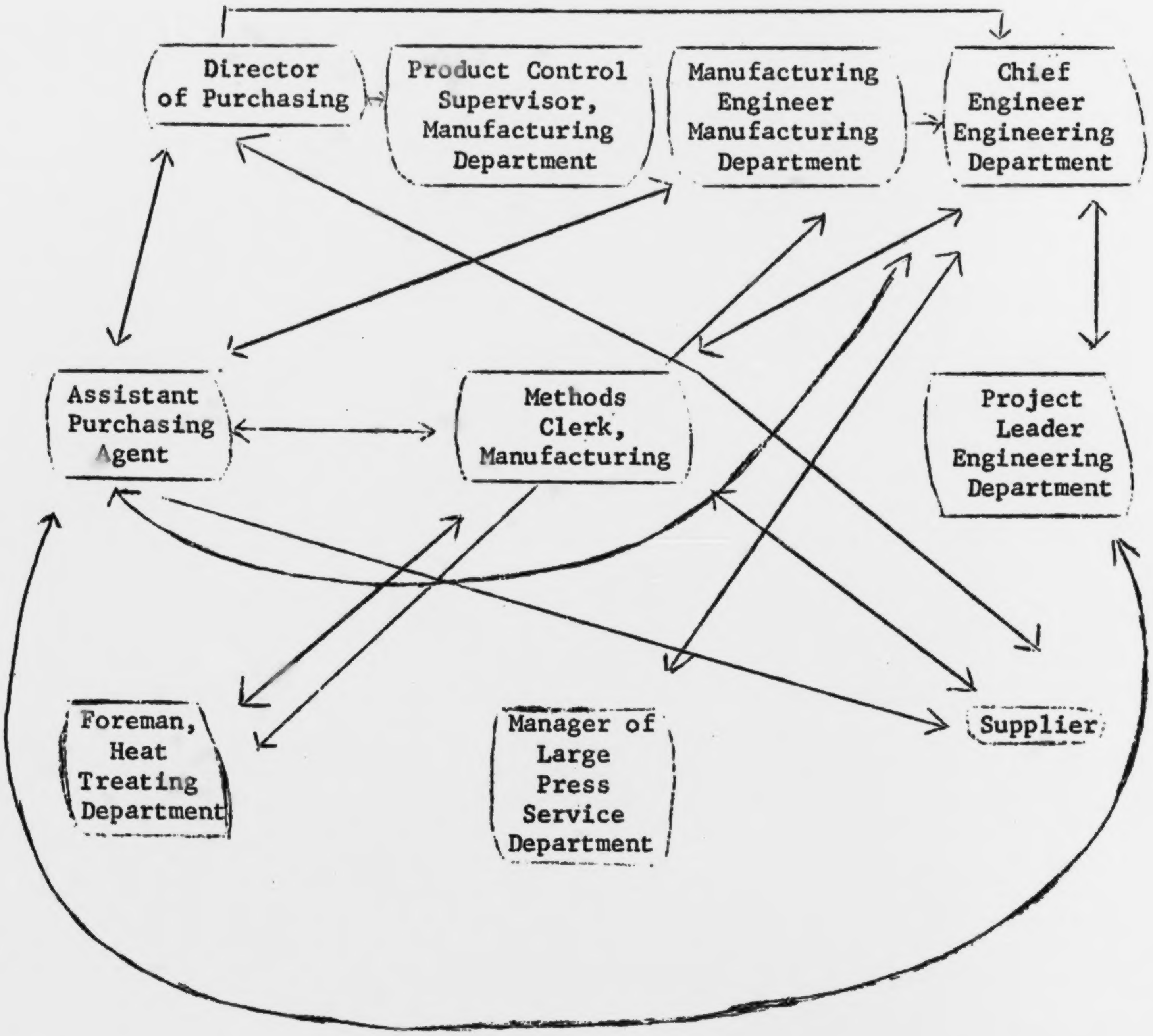
The two people who were most involved with the decision were somewhat less satisfied with it at the time the decision was made. The Assistant Purchasing Agent said he had been only fairly satisfied because as he stated, "any new product must be field-tested to prove its merit. At this point it is not as yet field-tested to my knowledge." The Chief Engineer said he had been "not too satisfied," and he expressed uncertainty about the structural change in the tire. He felt that the cemented cable joint might not hold.

However, all respondents indicated that if this decision could be made over again, they would be in favor of making the same purchase. Explaining his answer on this point, the Assistant Purchasing Agent said, "The delivery prospects and price advantages are tremendous." The Chief Engineer noted, "We know of no alternatives at this time."

Summary Of Persons Mentioned As Involved In Purchase

Purchasing: Director of Purchasing; Assistant Purchasing Agent	2
Production: Manufacturing Engineer; Product Control Supervisor; Methods Clerk; Foreman, Heat-Treating Department	4
Engineering: Chief Engineer; Project Leader	2
Service: Manager, Large Press Service Department	1
Total	9

VIII. Overall Pattern Of Communication Concerning Purchase


Director of Purchasing
Product Control Supervisor, Manufacturing Department
Manufacturing Engineer Manufacturing Department
Chief Engineer Engineering Department
Assistant Purchasing Agent
Methods Clerk, Manufacturing
Project Leader Engineering Department
Foreman, Heat Treating Department
Manager of Large Press Service Department
Supplier

IX. Supplier's Perception Of Purchase Decision

The salesman from the supplier company said that he visits the purchaser company about once a month "because we supply other rubber parts for the printing press." However, he said that he was contacted by the purchaser about this particular product.

He said that he had most contact with the Assistant Purchasing Agent about the purchase. He thoughtthat it was the Assistant Purchasing Agent and the Purchasing Director who took part in the decision to buy the product at this time; he did not mention persons in other departments who were involved in the decision.

Asked who it was at the purchaser company who decided to buy the product from this supplier, he said "I don't know. Possibly (the Assistant Purchasing Agent), possibly the Purchasing Director and possibly the engineers." He attributed the choice of his supplier company to "price, quality, and delivery...since we've done business [with the purchaser] with extrusions, this was the reason we were contacted."

Purchase Decision Study
Survey Research Center*
University of Michigan

10. CASE STUDY: DECISION TO PURCHASE HYDROCHLORIC ACID FOR PROCESSING STEEL

I. The Purchaser

The purchaser is a steel company, which produces steel in a variety of forms (sheet, strip, and bar) as well as a number of steel products. It had plants in a number of cities throughout the country. The purchase being studied here was made for a steel-making works located in the same midwestern metropolitan area where corporate headquarters are found.

The corporation has a number of divisions, some of which cover several plants, and each has its own purchasing office. The division purchasing offices have a loose coordination through a committee which meets several times a year to exchange information about purchases and suppliers. The plant for which the purchase studied was made has a purchasing office on its premises.

II. The Purchase Decision

The decision made was to purchase hydrochloric acid, a liquid chemical agent, for use in removing "scale", or iron oxide from hot roll strip steel. It is referred to by steel men as a "pickling agent." Prior to the use of hydrochloric acid, this work was done with sulphuric acid.

III. How Need Came Up

Another steel company had used hydrochloric acid for this purpose in what was described by one respondent as "the first commercial experiment." The Assistant Superintendent of No. 3 Cold Strip Mill said that he "heard that the (other) steel company had used it. Then (the Superintendent, No. 3 Cold Strip Mill) and I asked the (supplier) people to come in and explain it to us;" he recalled this as occurring in September 1964. The Purchasing Department evidently had the matter brought to its attention by those in the Cold Strip Mill operation. The Assistant Purchasing Agent said that the possibility of switching to hydrochloric acid was brought to his attention by the former Manager of the Cold Strip Mills, who is the superior of the superintendents of several separate mills.

IV. Deciding to Get Product

There were some questions and differences of opinion which arose concerning the possible use of hydrochloric acid as a substitute for sulphuric acid in the cold strip mill operation. There were questions about "whether we would get as good a job from this and also its safety," the Assistant Superintendent of the Metallurgical Department said. Also, "the cost was a question; at that time hydrochloric was more expensive than sulphuric," the Assistant Superintendent, No. 3 Cold Strip Mill, said.

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*Interviewing was conducted by the National Opinion Research Center. Interviews were conducted in May and June 1967 with the Assistant Superintendent of No. 3, Cold Strip Mill; with the Assistant Superintendent, Metallurgical Department; and with the Assistant Purchasing Agent. (Titles used are those at time of the purchase decision.) The supplier representative declined to be interviewed.

The Superintendent of the Chemical Department investigated to see if the company equipment could use hydrochloric acid and evidently found that it could. A staff chemist, Chemical Department, aided in this work, analyzing material samples.

The Assistant Superintendent of the No. 3 Cold Strip Mill said that he "recommended (the) trial" of the hydrochloric acid. He had discussed the matter with the Superintendent of No. 3 Cold Strip Mill. "There actually wasn't a need as such," he said, "but we wanted to try it because we felt it could do a better job more economically." On October 28, 1964, the Assistant Superintendent, No. 3 Cold Strip Mill, issued a requisition for a purchase of 348,000 gallons of hydrochloric acid from Supplier A in order to test it as a substitute for sulphuric acid. (This volume of acid is not considered large relative to consumption.) The Superintendent of No. 3 Cold Strip Mill approved this requisition. An informant in Purchasing noted that "Inasmuch as sulphuric acid is an inventory item, (the requisition) did not require the number of approvals normally required for this investment" (about $90,000). This requisition was sent to Purchasing.

The role of the Purchasing Department was that the Manager of Purchasing and the Assistant Purchasing Agent, in the latter's words "developed a contract arrangement with the supplier after we'd met and discussed the purchase." He noted that they had "a spirited discussion with the supplier concerning the contract." The Assistant Purchasing Agent said also that he had discussed the purchase with the Superintendent of No. 3 Cold Strip Mill, with the Manager of the Cold Strip Mills, with the Superintendent of the Chemical Department, with the Assistant Superintendent of the Metallurgical Department and with "a minimum of twenty-five (others) whose names I can't (recall)." A purchase order for the hydrochloric acid was issued by the Assistant Purchasing Agent on November 3, 1964.

Trial Run. After the first purchase was made, the Assistant Superintendent of No. 3 Cold Strip Mill said, "we went on a month trial run to find out just what it would cost and we found that the increased productivity and better product made up for the slight difference in cost." About twenty-five men in the No. 3 Cold Strip Mill were involved in some stage of this assessment, in the estimate of the Assistant Purchasing Agent.

The Assistant Superintendent of the Metallurgical Department also entered the picture in January 1965 (according to his recollection), after the purchase had been made, in order to evaluate the performance of the hydrochloric acid, and, in the words of the Assistant Superintendent No. 3 Cold Strip Mill, "to be sure the steel wouldn't be harmed during the trial." "We were asked if we would try it and knew it was being used by other steel companies," the Assistant Superintendent, Metallurgical, said. "We evaluated it and found it to be all right." He noted that he had discussed with the Superintendent of No. 3 Cold Strip Mill and with the Manager of Cold Strip Mills the use of hydrochloric acid in other steel plants. He said too that his superior, the Manager of Quality Control, also was involved in the evaluation of the results obtained with use of the new acid.

Persons from several other departments were also involved in evaluation of the switch from sulphuric to hydrochloric acid. A representative from

Accounting prepared cost figures on the test of the new acid. Five men from the Engineering Department (a Senior Engineer and four other Engineers) prepared necessary engineering information. The Superintendent of the Industrial Engineering Department provided to the Superintendent of the No. 3 Cold Strip Mill data prepared by his department concerning productivity using hydrochloric versus productivity using sulphuric acid. That a large number of persons were involved in the problem at one time or another is further suggested by the comment by the Assistant Superintendent, No. 3 Cold Strip Mill, that in addition to a number of specific persons he named, "I would say another twenty-five men from various departments whose names I can't even recall (were involved)."

Influence on Decision. Of all those involved, the greatest influence on the decision to make the change to hydrochloric acid was, in the judgment of the Assistant Purchasing Agent, exerted by those in the Cold Strip Mills. He named three persons--the Superintendent and Assistant Superintendent of No. 3 Cold Strip Mill and the Superintendent of No. 2 Cold Strip Mill as most influential on the decision to switch "because they know the operating procedure and had to use this product." The Assistant Superintendent, No. 3 Cold Strip Mill, named his superior, the Superintendent of No. 3 Mill, as most influential in this decision "because he's the department head and he wanted it." The Assistant Superintendent of the Metallurgical Department emphasized the role of the Manager of Purchasing, naming him as most influential "because of the dollar savings that could be made."

Reasons for Decision. As for the basic reasons behind the decision, the Assistant Superintendent, No. 3 Cold Strip Mill, and the Assistant Purchasing Agent both emphasized the speed of the new process as most important. The reason for the decision, the former said, was "to try to increase production." The latter named "faster production" as the number one reason, but also noted the "lower cost in comparison to the sulphuric method." The Assistant Superintendent, Metallurgical, (who was less involved in the basic decision to switch) saw "the fact that it gave us a cleaner strip" as the most important reason for the decision; he also noted the lower price and the increased productivity.

Hydrochloric acid is now being used as a regular "pickling agent" in several company plants. Additional studies were made following the original one, using various acid inhibitors in conjunction with hydrochloric acid.

Commenting on the purchase decision, the Assistant Purchasing Agent said, "I think it's an example of a group working together to effect production economically and to produce a better product."

V. Choosing a Supplier

Five suppliers of the acid, among them some of the nation's leading chemical manufacturers, were considered. The Assistant Purchasing Agent, who said he had the greatest influence in choosing the supplier, discussed the choice of the specific product and supplier with the Superintendent of No. 3 Cold Strip Mill, with the Superintendent of the Chemical Department and with his own superior, the Manager of Purchasing. There were some differences of opinion, he said, about the particular grade of hydrochloric acid to purchase. Some people, he said "felt that the best grade of hydrochloric acid should be used...while others thought not." These differences were resolved, he said, through meetings and by the formulation of a specification for the product. The meetings in question were attended by the Superintendent of No. 3 Cold Strip Mill, the Superintendent of the Chemical Department and the Assistant Purchasing Agent.

In the course of the deliberations concerning the purchase, the Assistant Purchasing Agent talked with the President of the successful supplier (a smaller company than other suppliers considered) and with a supplier sales representative.. Initial meetings were devoted to a sales presentation by this supplier. Later discussions concerned technical information and the contract negotiations.

The successful supplier was chosen, the Assistant Purchasing Agent said, "because he had the know-how while the others just manufactured the acid--the working know-how."

The Assistant Superintendent of No. 3 Cold Strip Mill added that when the switch from sulphuric to hydrochloric acid was first considered, "really there was no choice at that time because (the successful supplier) had the inhibitor that made it necessary for us to buy from them." The Assistant Superintendent, No. 3 Mill, said that he talked with the sales representative and with the Vice-President of the supplier company. "They gave us information on how to use hydrochloric and supervised two weeks of its trial," he said.

VI. Sources of Information

Asked about the ways in which he got information about the product or about suppliers of this product, the Assistant Superintendent, No. 3 Cold Strip Mill, said he had obtained information from the other steel company which had used this process before and "then we called (successful supplier) for further information...on processing and how it helped their costs--just general information on processing, cost, and yield." He said he had not seen any relevant materials in any publication. He felt that the information from the supplier was most valuable to him "because they had had the experience with it and had the inhibitor."

The Assistant Superintendent, Metallurgical Department, said that he had obtained relevant information "from general conversation with other steel producers and trade magazines. We heard about its being used in the manufacturing of steel." (He said he could not recall any specific publications noting only "I read dozens of them.") He said also that he had obtained information from the Superintendent of No. 3 Cold Strip Mill and from the Manager of Cold Strip Mills about the use of hydrochloric acid in other steel plants. Of the various sources of information, he felt that the information from the other steel producers was most valuable to him. "They were already using it," he noted.

The Assistant Purchasing Agent said that he had obtained information "mainly by calling them (the suppliers) in and being honest with them about our needs and the potential of hydrochloric acid. Most of the sulphuric producers also produce hydrochloric." From the supplier, he said, he got information about the availability of the product and about prices. He felt that the information from suppliers was most valuable to him "because of their availability of technical data and background." The Assistant Purchasing Agent said that he did not get information from persons outside the company (other than from suppliers) or from any publication.

VII. Satisfaction with Purchase Decision

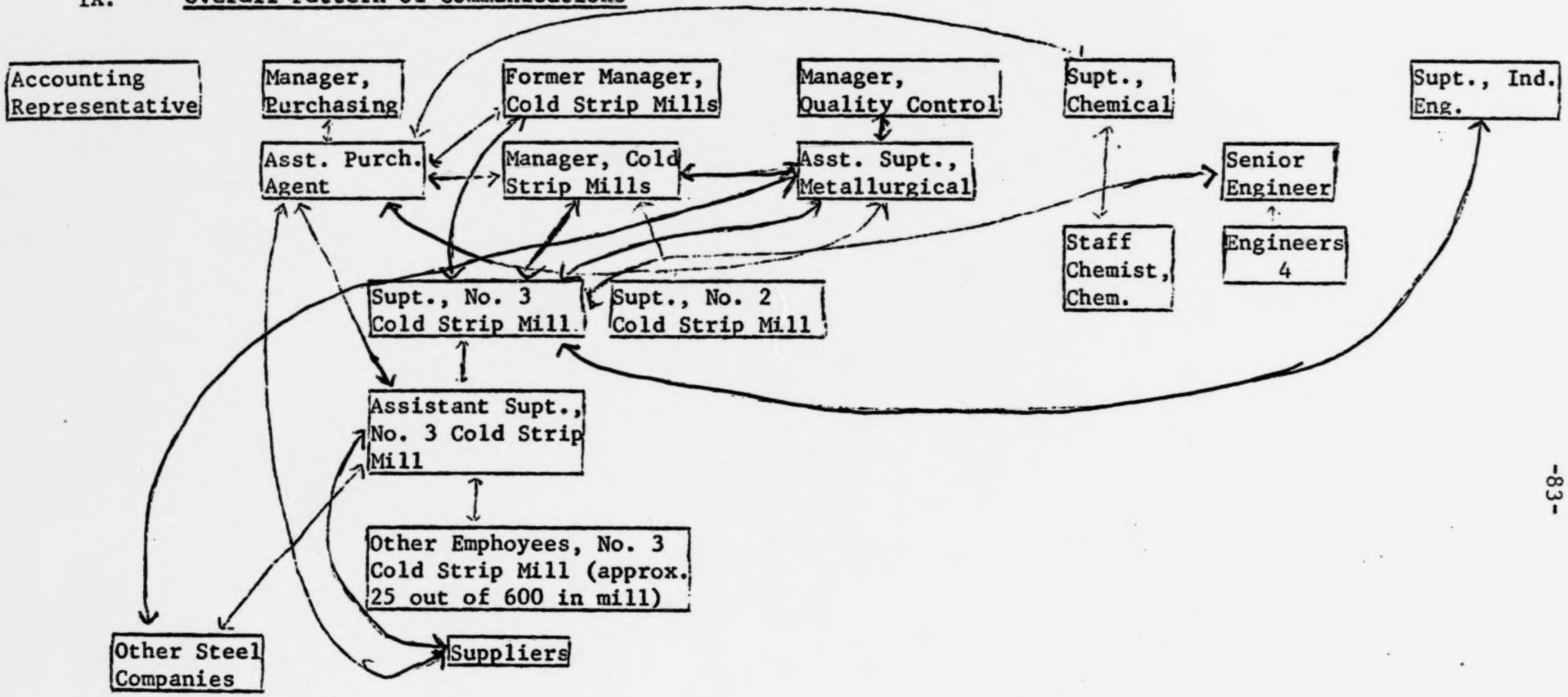
The three men interviewed all said they had been satisfied with the purchase decision at the time it was made. The Assistant Purchasing Agent said he was satisfied because "our tests showed that we could produce the strip more economically." The Assistant Superintendent, Metallurgical, said "I knew it worked out all right for other companies so I was sure it would work out for us."

All three men said that, if the decision could be made over again, they would be in favor of making the same choice. The Assistant Superintendent, No. 3 Cold Strip Mill, said "it has worked out very well and since the original purchase (hydrochloric acid) has dropped in price considerably and it has increased our production, which is what I'm mainly interested in." (It may be noted that since this purchase decision, sulphuric acid has risen considerably in price while the price of hydrochloric acid has dropped sharply.)

VIII. Summary of Persons Mentioned as Involved in Purchase

Production:	Former Manager, Cold Strip Mills (retired); Manager, Cold Strip Mills; Superintendent, No. 3 Cold Strip Mill; Assistant Superintendent, No. 3 Cold Strip Mill; 25 other men (approximately) in No. 3 Cold Strip Mill; Superintendent, No. 2 Cold Strip Mill	30
Technical Specialists:	Manager, Quality Control; Assistant Superintendent, Metallurgical Department; Superintendent, Chemical Department; Staff Chemist, Chemical Department	4
Engineering:	Senior Engineer; Four Engineers	5
Purchasing:	Manager of Purchasing; Assistant Purchasing Agent	2
Accounting:	One Person (Title Unknown)	1
Industrial Engineering:	Superintendent, Industrial Engineering	1
Other:	Persons at other steel companies (specific persons unspecified); many additional persons involved in purchase who could not specifically be recalled by respondents	--
	Total	43+

IX. Overall Pattern of Communications


Accounting Representative
Manager, Purchasing
Former Manager, Cold Strip Mills
Manager, Quality Control
Supt., Chemical
Supt., Ind. Eng.
Asst. Purch. Agent
Manager, Cold Strip Mills
Asst. Supt., Metallurgical
Senior Engineer
Staff Chemist, Chem.
Engineers 4
Supt., No. 3 Cold Strip Mill
Supt., No. 2 Cold Strip Mill
Assistant Supt., No. 3 Cold Strip Mill
Other Emphoyees, No. 3 Cold Strip Mill (approx. 25 out of 600 in mill)
Other Steel Companies
Suppliers

11.CASE STUDY: DECISION TO BUY A VANADIUM ALLOY FOR MAKING STEEL

I. The Purchaser

The purchaser is a steel company, which produces steel in a variety of forms (sheet, strip, and bar) as well as a number of steel products. It has plants in a number of cities throughout the country. The purchase being studied here was made for a steel-making works located in the same midwestern metropolitan area where corporate headquarters are found.

The corporation has a number of divisions, some of which cover several plants, and each with its own purchasing office. The division purchasing offices have a loose coordination through a committee which meets several times a year to exchange information about purchases and suppliers. The plant for which the purchase studied was made has its own purchasing office on its premises.

II. The Product Purchased

The product obtained is a metal alloy composed mainly of vanadium and also containing carbon. The vanadium alloy is itself an alloying agent used as an additive in making high strength steel. It adds to the hardness and impact strength of the steel. This new alloy is made by only one supplier, a large company. Previous to the testing of this vanadium alloy, the primary alloying agent used was ferro-vanadium.

III. How Need Came Up

The initiative for testing the new vanadium alloy came, respondents all agreed, from the large supplier company which had developed it--specifically from a regional Sales Manager of that supplier company. The Superintendent of No. 1 Open Hearth said that the supplier "developed this new product and brought it to our attention. Actually, there wasn't a need but it was cheaper..." Respondents agreed that the supplier brought the new product to their attention in early 1963, with estimates of the date centering around April 1963.

Four persons--the Manager of Steel Production; the Superintendent of No. 1 Open Hearth; the Assistant to the Purchasing Agent, Purchasing Research; and the Assistant Superintendent of the Metallurgical Department--all had early contact with representatives of the supplier. The first three men reported talking with the regional Sales Manager from the supplier. "He presented the idea of trying the product to us," the Manager of Steel Production

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*Interviewing was conducted by the National Opinion Research Center in May 1967. Those interviewed were the Manager of Steel Production; the Assistant Superintendent, Metallurgy; the Superintendent of No. 1 Open Hearth; the Assistant Purchasing Agent; and the Assistant to the Purchasing Agent, Purchasing Research. (Titles are as of time of the purchase.) Also, the regional Sales Manager of the supplier company was interviewed in July 1967.

said. The Assistant Superintendent, Metallurgical, reported similar contacts with two other supplier representatives--their Manager of Product Development and their Sales Manager for the particular city. "They both came and presented the product and asked us to make a study or test of it," he said.

IV. Deciding to Use the New Alloy

Discussion and evaluation concerning use of the new alloy took place among those in Purchasing, those in Production, and those in the Metallurgical Department.

The Manager of Steel Production, who has authority over all steelmaking facilities at the plant, has to approve any purchases of this type of material. He said he discussed the subject with the Manager of Purchasing and with the Assistant Superintendent of the Metallurgical Department. The Assistant Superintendent, Metallurgical, whose department is responsible for setting metallurgical standards and setting controls to meet customer standards, said that"we evaluated the product and decided it was comparable to ferrovanadium and found it worthy." Though the Assistant Superintendent, Metallurgical, appeared to be the person in his department most involved in this purchase, at least two others in the Metallurgical Department also were involved in the matter. These were a Research Metallurgist, who took part in discussion of the product and its applications, and the Superintendent of the Metallurgical Department who had to approve the product. The Assistant Superintendent, Metallurgical, said that he discussed the matter with the Manager of Purchasing and with the Superintendent of the No. 1 Open Hearth.

The Superintendent of the No. 1 Open Hearth said that he is "responsible for all decisions on problems of production of one million tons of steel a year." His part in the decision, according to the Manager of Steel Production, involved a judgment "as to the suitability of the product in his shop." "I said we'd buy it," the No. 1 Open Hearth Superintendent said. He confirmed that he discussed the matter with the Metallurgical Superintendent and said this was the only person with whom he discussed the subject.

Role of Purchasing. In the Purchasing Department, the Assistant Purchasing Agent was concerned with the comparison of price between the vanadium product then being used and the new vanadium alloy as well as with checking "to see if it would work as well." He said he discussed the possibility of getting the new product with both the Superintendent and the Assistant Superintendent of the No. 2 Open Hearth, with the Assistant Superintendent of the Metallurgical Department and with "I'd say another six or eight men from those departments." (He could not recall the specific other persons with whom he talked.)

Another person involved from the Purchasing Department, the Assistant to the Purchasing Agent, Purchasing Research, said that he "was involved in meetings and discussions on the economic value" of the product. He recalled discussing the possibility of getting the new alloy with the Assistant Superintendent of the Metallurgical Department but could not recall the names of others with whom he discussed the matter.

Questions Arising. A number of questions arose in the course of these discussions about the desirability of switching to the new vanadium alloy. First, as the Assistant Superintendent, Metallurgical Department,put it, 'there were questions of the quality of the product and if it could replace ferro-vanadium." The Superintendent of No. 1 Open Hearth clarified the nature of this question, noting "there was some question if we could handle the high carbon content--that is, the debris."

To answer this question, a requisition for an experimental order of the new product was prepared on July 3, 1963, signed by the Auxiliary Foreman of No. 1 Open Hearth and approved by the Superintendent of No. 1 Open Hearth. The Assistant Superintendent, Metallurgical,explained, "We ran a twenty heat test program and found the product to be as good as ferro-vanadium."

A second question, with which the Purchasing Department was concerned, had to do with the nature of a contract for the product. "We were not quite sure that we should tie ourselves to a long-term contract. We weren't sure it would work and we weren't sure it just wasn't an attempt by the supplier to capture a given market," the Assistant Purchasing Agent said. He stated that this problem was resolved by "additional meetings with (supplier) and, as I recall, we signed a one-year contract for a portion of our requirements, so we didn't have to put all our eggs in one basket." The Assistant Purchasing Agent said he talked with the regional Sales Manager of the supplier (the man who had pushed this product with the purchaser) concerning the negotiation of the contract and the price.

Reasons for Choice. The lower price of the new alloy, as compared to the price of the product previously used, was given as the primary reason for the decision to go ahead with this purchase by the Manager of Steel Production and by the two Purchasing men interviewed (the Assistant Purchasing Agent and the Assistant to the Purchasing Agent, Purchasing Research). The Manager of Steel Production, the Assistant to the Purchasing Agent, and the Assistant Superintendent, Metallurgical, mentioned a relative shortage of ferro-vanadium as contributing to the decision; the Metallurgical man felt that this shortage of ferro-vanadium was the primary reason. While differing somewhat from others in the relative weight he gave to the factors affecting the decision, the Assistant Superintendent, Metallurgical, summed up the general rationale for the decision in these words: "Ferro-vanadium was in short supply and expensive and (the new type of) vanadium produced the same results and was plentiful and less costly."

Influence on Decision. Asked for their judgement about who had the most influence on the decision to use the new vanadium alloy, the five respondents differed somewhat in their perspective. Two persons named the Assistant Superintendent, Metallurgical Department, as most influential on the basis of his expertise. "He determines if the product will do a good job," the Assistant Purchasing Agent said. The Manager of Purchasing was named as most influential by the Assistant to the Purchasing Agent "because it would save money for the company," evidently meaning that the decision was based primarily on the Purchasing Department's desire to save money.

The Superintendent of No. 1 Open Hearth felt that he was quite influential in the decision "because I had to use it in my Open Hearth." Finally, the Manager of Steel Production felt that the regional Sales Manager from the supplier was most influential in the purchaser's decision because "He came in and sold us the product, or the idea of trying it." With regard to events within the company, the Manager of Steel Production commented, "Well, in a way I made the final agreement to buy but it was a mutual thing between Purchasing, Quality Control (which includes Metallurgical), and myself." He continued, "This was a very simple purchase so far as decisions were concerned. We needed the alloy, we tried it, liked it, and bought; but other purchases often take years for a decision to be made."

Following the initial experimental order, a contract for a much larger supply of the vanadium alloy, to meet the company's needs for the year 1964, was signed in November 1963.

V. Sources of Information

The Manager of Steel Production said that he got his most valuable information from the Assistant Regional Manager of the supplier. "This was a product that had never been on the market," he commented. He also noted getting information from the Assistant Superintendent, Metallurgical, concerning the "suitability of the chemistry" and from the Manager of Purchasing concerning "price and availability." He said he did not get any information from people outside the company and did not see any relevant materials in any publications.

The Assistant Superintendent, Metallurgical Department, also said that his most valuable source of information was the supplier company. "They hadn't put it on the market when they asked us to try it," he stated. He said he did not get any information from people outside the company or from publications.

The Superintendent of No. 1 Open Hearth also named the supplier as his most valuable source of information. He said that the supplier provided information "about its alloy and vanadium content and also about the differences in price from that of ferro-vanadium." He mentioned also "our tests" as a source of information. He, too, said he had not gotten information relevant to the product from people outside the company or from any publication.

The Assistant to the Purchasing Agent, Purchasing Research also mentioned the supplier as a source of information but said that his most valuable source of information was "our own people who tested the product, because they proved it in testing." He said he had also obtained information from the Assistant Superintendent, Metallurgical and from the Assistant Superintendent of No. 1 Open Hearth "concerning the actions of (the new alloy) in operation." He did not, he said, get information from anyone outside the company or from any publication.

The Assistant Purchasing Agent felt that his most valuable source of information was the supplier and mentioned specifically information about the price difference. He said also that "we did check (another steel company) who had tried (the product) in its early stage...on how it worked out for them."

He said he had talked with "someone in the operating personnel" at the other steel company(he couldn't recall who this was). Like the others, he said that he did not see any relevant articles or advertisements in any publications.

SUMMARY: Number of Persons (of five interviewed) Mentioning the Following Sources of Information

Supplier	5
Company's Tests of Product	2
Others in Company	2
Person Outside Company	1

VI. Satisfaction with Purchase Decision

All five men interviewed said that they had been completely satisfied with the purchase decision at the time it was made. The satisfactory test results, the price, and the satisfactory contract were all mentioned as reasons for satisfaction. In addition, the Superintendent of No. 1 Open Hearth commented that the supplier "is a reputable firm and I was sure that any product they developed would be good."

All five men also commented that the product had worked out as expected. "We found it to be what we wanted and we have been buying it since," the Assistant Superintendent of the Metallurgical Department said.

VII. Summary: Persons Mentioned As Involved In Purchase*

Production:	Manager, Steel Production; Superintendent, No. 1 Open Hearth; Assistant Superintendent, No. 1 Open Hearth; Auxiliary General Foreman, No. 1 Open Hearth; Superintendent, No. 2 Open Hearth; Assistant Superintendent, No. 2 Open Hearth.	6
Technical Specialists (Metallurgical Department):	Superintendent; Assistant Superintendent; Research Metallurgist.	3
Purchasing:	Manager; Assistant Purchasing Agent; Assistant to Purchasing Agent, Purchasing Research.	3
Other:	Operations person at another steel company	1
	Total	13

*The Assistant Purchasing Agent and the Assistant to the Purchasing Agent both could not recall all the persons to whom they spoke and may have spoken to persons other than those listed above.

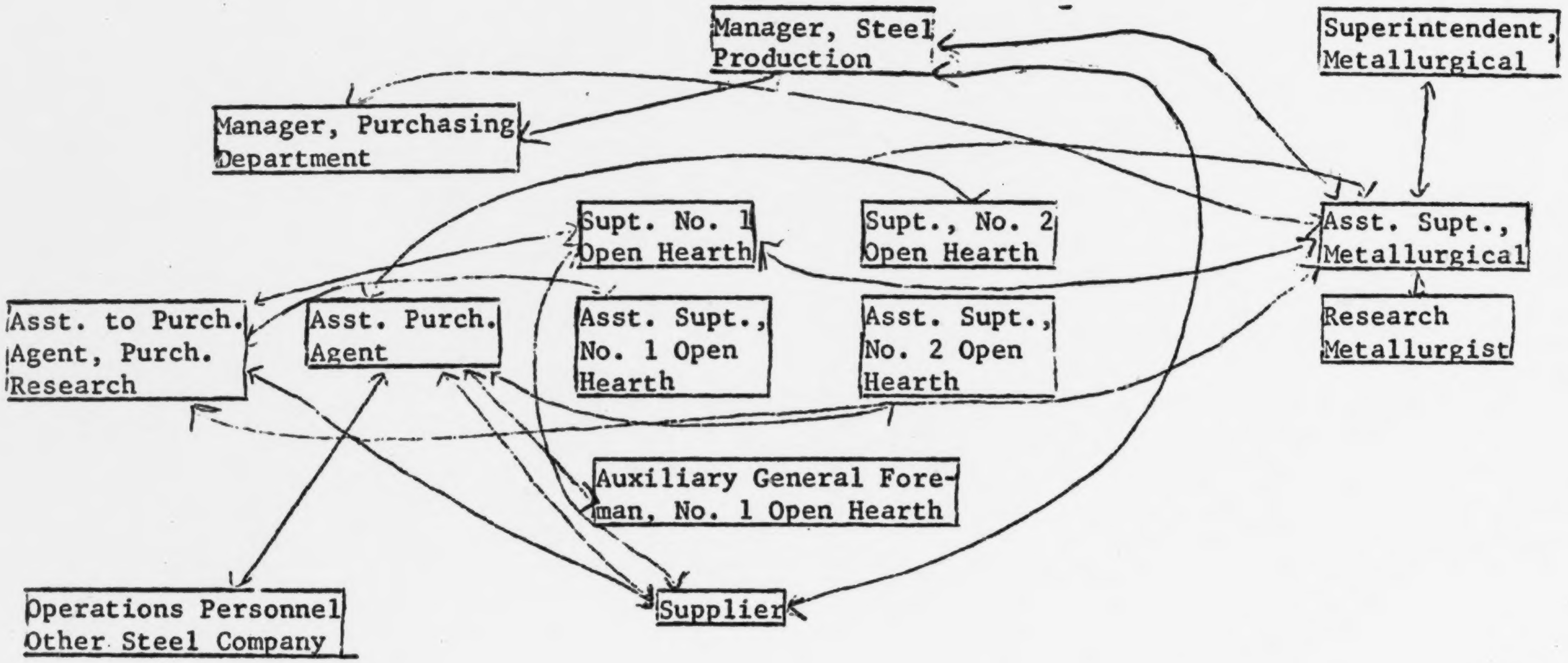
VIII. Supplier's Perceptions Concerning Purchase Decision

The regional Sales Manager of the supplier company, who was the person at his company most involved in this sale, is a metallurgical engineer and is responsible for sales in six states. He said that he had most contact at the purchaser company with the Assistant Superintendent and the Superintendent of the Metallurgical Department and with the Superintendent of No. 1 Open Hearth. Asked with which of these men he had most contact, he answered, "I think it was a transaction where we saw everyone concerned, one as much as another...I think it was a group decision, not any one person."

Asked how he thought the people in the purchaser company knew about his own company and its products, he said, "I hope we do a good enough job of keeping our name in front of everyone. On this particular item, we went to them to demonstrate our new alloy." Like those at the purchaser company, the supplier sales manager indicated that there is no other supplier for this particular alloy, which has a trade name.

He commented finally, "(Purchaser company) in particular, by their receptiveness to new ideas, makes us try even harder to come up with new items that will help them. I guess briefly I could say, with them, our byword is 'Think more,talk less'."

IX. Pattern of Communications Concerning Purchase


Manager, Steel Production
Superintendent, Metallurgical
Manager, Purchasing Department
Supt. No. 1 Open Hearth
Supt., No. 2 Open Hearth
Asst. Supt., Metallurgical
Asst. to Purch. Agent, Purch. Research
Asst. Purch. Agent
Asst. Supt., No. 1 Open Hearth
Asst. Supt., No. 2 Open Hearth
Research Metallurgist
Auxiliary General Foreman, No. 1 Open Hearth
Operations Personnel Other Steel Company
Supplier

Purchase Decision Study
Survey Research Center*
University of Michigan

12. CASE STUDY: DECISION TO PURCHASE A COPYING MACHINE

I. Purchaser

The purchaser is a subsidiary of a large international corporation which has several subsidiary divisions with plants in both the U.S. and Canada. This particular subsidiary division manufactures steel castings and forgings in four plants to meet railroad and industrial needs.

The company purchasing department, which employs thirteen persons, clears all company purchases--although the actual decision to make plant purchases is made by the Works Manager at the plant level. In this case, the purchase was made at the corporate level for the corporate offices.

II. The Product Obtained

The product, which was leased, is an electric copier of original sheets of printed paper. It is able to make large quantities of copies in a short amount of time from the original, without the use of chemicals of any sort. It can be used to make "master" sheets, which can then be used on a multilith machine, which is economical to use when making more than approximately 100 copies. Additional features can be added to the unit, such as a collating unit and a larger-image area, when needed. Previous to the rental of this machine, a different model copier of the same make was used, along with a mimeo machine and a two-step-process photocopier (a negative, then a positive copy had to be made).

III. How Need For Getting Product Came Up

Discussion of the need for a new copying machine occurred in approximately January of 1966. The copier then being used was not doing an efficient job. Often several clear copies of originals were needed, which the old unit could not do quickly. The photocopier was expensive and involved to operate. It required mixing solutions, a dryer, and sinks. A further disadvantage of the photocopiers was that coded paper (paper treated with zinc oxide) had to be used, and while this gave a fairly satisfactory-looking copy, the paper disintegrated after a few years, which made it very unsatisfactory for record-keeping purposes over a long period of time.

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* Interviewing for this study was conducted by the National Opinion Research Center

The Assistant Director of Purchasing, who was in charge of seeing that the Print Shop ran efficiently, instigated the discussion of the need for a new copier. He discussed the matter with the Director of Purchasing, who subsequently discussed the need with the Print Shop Operator, who also talked with the ex-Purchasing Director (who was about to retire but remained on in an advisory capacity until the new Purchasing Director was sufficiently trained) about the need for a new copying machine.

IV. Deciding To Get A New Copier

It was the responsibility of the Assistant Director of Purchasing to find out which copying unit would best accomplish the desired objectives: to speed up the copymaking and to provide a backup operation for the multilith when the multilith was not in operation. Both he and the Print Shop Operator said that there had been differences of opinion, largely over the issue of whether the company made enough copies to justify the expense of obtaining a new unit. The Assistant Director also mentioned that there had been doubt as to whether the new copying unit under consideration could perform all of the functions desired by the company, such as making masters

The matter was resolved by getting more factual information. The Assistant Director of Purchasing requested that the supplier being most seriously considered install a mode analyzer, which measured how many copies were run off per month and what the unit cost to the company was for using their old copier. This cost was then compared to the cost of the same number of copies using the supplier's new model unit. It was demonstrated to the Director of Purchasing, whose decision it was to make, that the installation of the new unit would offer the company significant yearly savings. The Print Shop Operator, the Assistant Director of Purchasing, and the Director of Purchasing were satisfied, after seeing the model in operation, that it could produce clear copies in large quantities in a short amount of time, would be a savings in time to company personnel, could be utilized to produce masters, could collate, could make larger images when necessary, and that the new model unit was in general much easier to operate than other units then in use at the company.

The Assistant Director of Purchasing felt that he had had the most influence on the decision to get a new copier, because "I knew the need, [and] I developed the information regarding types of units available." The Director of Purchasing agreed that the Assistant Director of Purchasing had had the most influence on the decision to get the new machine, saying, "One of his jobs is to keep the Print Shop Operating." The Print Shop Operator, however, felt that no one person had the most influence on this decision. "Everybody in Purchasing was pushing for it," he said.

The key reason behind the decision, respondents agreed, was the time savings involved. As the Purchasing Director put it, "The time element is most important. It is intangible but we used to have sometimes up to ten people waiting to use the [old machine]." The decision to replace the old machine was approved by the Vice-President for Manufacturing when the requisition reached him in June, 1966.

V. Selecting A Specific Type Of Machine And A Supplier

Seven suppliers were mentioned as having been thought of initially, but only three were considered at all seriously. The supplier considered most seriously was the one from which the company leased its previous machine.

The first, informal contact that the three men in the Purchasing Department had with suppliers was in the course of attending several trade shows at which many suppliers displayed and demonstrated several different types of office equipment, including copiers. They also saw demonstrations of the various copiers at the suppliers' offices and requested demonstrations of the several models under consideration by three suppliers in the company's offices.

A major reason for the choice of the particular supplier chosen, as described by the Assistant Director of Purchasing, was the ease with which the leasing agreement could be terminated. Moreover, according to the Print Shop Operator, "Once we got [this brand] there was no changing to a different brand; everybody was used to it and liked the copies."

The Print Shop Operator, the Assistant Director of Purchasing, and the Director of Purchasing, all had contact with the sales representatives of the successful supplier. The Print Shop Operator sat in on conversations between the supplier representative and the Purchasing men and asked questions about the supplier's new machinery. The Director of Purchasing mentioned that the local salesman involved was a man who called on the company's offices regularly.

On the basis of his familiarity with copying machines, and of his discussion of the merits of various machines with the ex-Director of Purchasing, the Print Shop Operator recommended a particular model copier to the Assistant Director of Purchasing. The Assistant Director of Purchasing discussed the Print Shop Operator's recommendation with the ex-Purchasing Director and subsequently recommended to the Director of Purchasing that the older model copying unit in the Print Shop be exchanged for the newer model recommended by the Print Shop Operator.

There were no differences of opinion reported in the matter of choosing a particular model copier from a particular supplier. The Assistant Director had the most influence on the decision to obtain this particular model from this supplier. The Director said of the model chosen, "It's what he wanted," and the Assistant Director said, "It was my problem to solve, his decision (the Purchasing Director's) was based primarily on my recommendation."

The Director of Purchasing had the final say on the choice of the particular type of copier, "I made the decision to get this [model]," he said. To help decide on the selection of a particular model, he said that "we took our masters to a company in the same building [as the purchaser company] which had this model and ran masters." The results were evidently quite satisfactory.

The particular model copier was chosen, according to the Assistant Director of Purchasing, because of "the versatility, the speed of the unit, [lower] copy costs, and the potential advantage of adding accessories to make the model even more versatile." Another factor mentioned by the Director of Purchasing which influenced the selection of this model was the ability of the copying unit to pick up colors, especially blue, the most difficult color to pick up on a copier. This supplier's units did a better job in all aspects than those of any other supplier, he believed. He added that the model chosen was a dry process machine, which meant that it was much easier to operate and that it was faster than any other unit or process that the company had been using.

A requisition for leasing a new copier was prepared on June 7, 1966 and signed by the Assistant Director of Purchasing, the Director of Purchasing, and the Vice-President for Manufacturing. A purchase order, signed by the former two (the Purchasing men) was issued on July 25, 1966.

VI. Sources Of Information About Product And Suppliers

The Print Shop Operator went to numerous trade shows with the Assistant Director of Purchasing and the Director of Purchasing and saw several types of copying units demonstrated by several suppliers. He saw an advertisement by the successful supplier in *Fortune* magazine, which explained the entire copying process, the cost of the copier, and that the unit was available for either purchase or rental. He also saw television advertisements which demonstrated what a particular supplier's copiers could do, with emphasis on the simplicity of operation. "They showed a monkey making copies," he said. The Print Shop Operator said that the Purchasing Department had contacted the sales representative of the successful supplier to request a proposal with regard to what this particular model could do, its value to the company in terms of cost savings, speed of reproduction, and clarity of copies. Overall, he felt that the sales representative of the suppliers were his most valuable source of information, because, as he stated, "When you get a human being in front of you, you can pitch questions at him and you get a 'yes' or 'no'."

The Assistant Director of Purchasing said that their initial knowledge of the supplier was due to the fact that they had another, less specialized model of the same brand from (the same supplier), and knew its capabilities. He also mentioned the trade shows that he and the Print Shop Operator and the Director of Purchasing attended as an important source of information, in that they looked at many types of copiers, then "selected those that had possibilities for our own use." A third source of information about suppliers was advertisements and articles about copying machines in various "management magazines". The fourth, and what the Assistant Director considered his most important source of information, were the advertisements of one supplier (not the one chosen) because he felt "they give you more factual information in their ads." His second best source, he said, was the sales representative of the successful supplier, because he showed the respondent what his company's copying units could do.

The Director of Purchasing who also attended the trade shows, mentioned that he tested the various types of copying units at the trade shows, using printed material he had brought with him, to find out which unit did the best job of copying. He said that he felt these trade shows were his most valuable source of information because he was able to see the machine in operation and the end results. Other sources of information included advertisements in (unspecified) newspapers, magazines, and trade journals, although he said of these sources, "Purchasing people are reluctant to believe everything they read. So we naturally investigate." A third source of information for him were the supplier's sales representatives who called on the Purchasing Department.

VII. Satisfaction With Purchase Decision

The Director of Purchasing, the Assistant Director of Purchasing, and the Print Shop Operator all said that they had been satisfied with the purchase decision at the time it was made. The Director of Purchasing said that the model "has met with complete acceptance by all of our personnel." The Assistant Director of Purchasing concurred, saying that "because of the thoroughness with which we investigated this, we knew we were on solid ground with our recommendations. We had pretty well established that we were going to reduce our costs. We knew we were going to arrive at a savings."

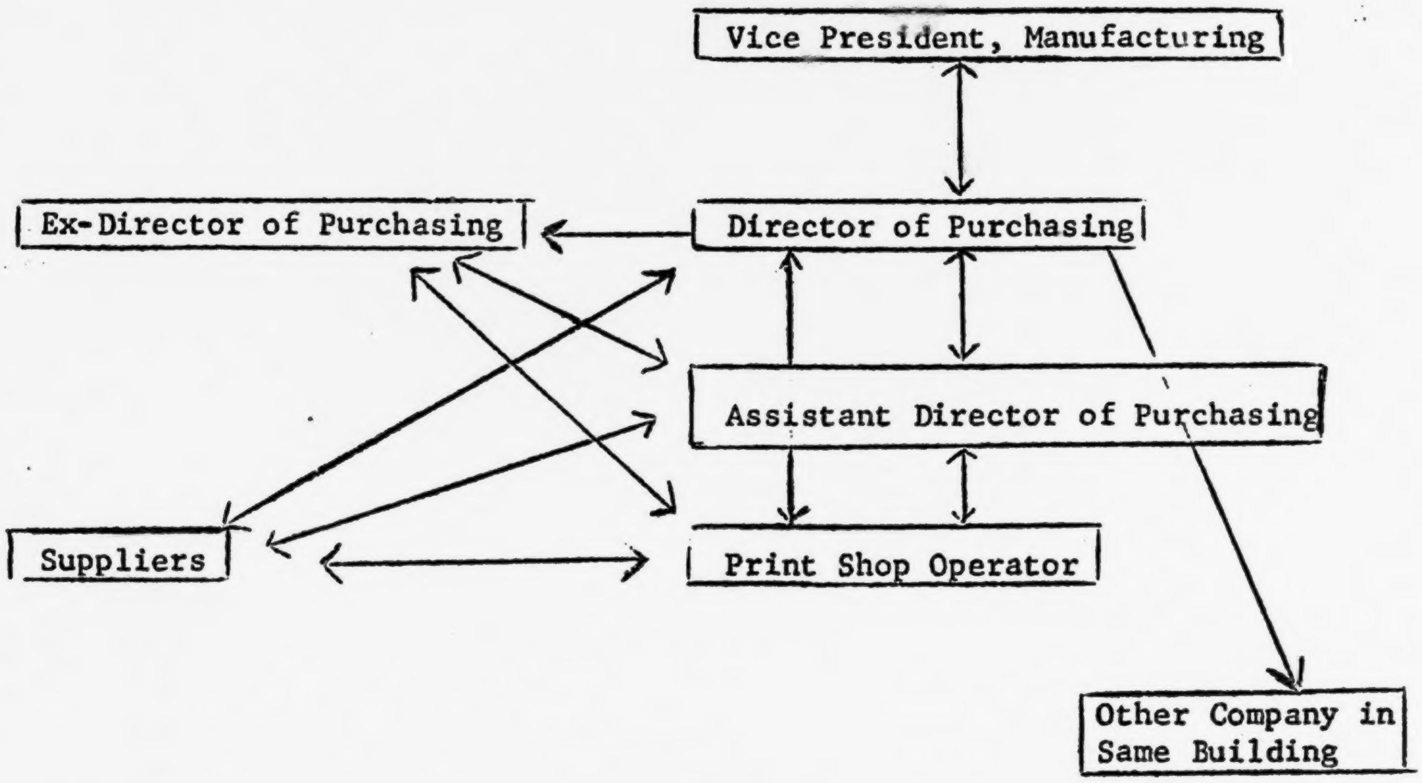
All three respondents also said they would favor making the same decision again, if they had it to do over. The Director of Purchasing noted that, "It will save us $1,000 a year copying costs, plus the saving made in delays to personnel using this machine, which is going to be significant."

VIII. Summary Of Persons Involved In Purchase*:

Purchasing: Ex-Director of Purchasing, Director of Purchasing, Assistant Director of Purchasing	3
Top Management: Vice-President of Manufacturing	1
Services: Print Shop Operator	1
Total	5

* Also contact was presumably made with persons at other company on whose machine trial masters were run.

IX. Pattern Of Communications Concerning Purchase Decision


Vice President, Manufacturing
Ex-Director of Purchasing
Director of Purchasing
Assistant Director of Purchasing
Suppliers
Print Shop Operator
Other Company in Same Building

X. Supplier's Perception Of The Purchase Decision

The supplier representative said that he had contact with the Assistant Director of Purchasing and with the Director of Purchasing, especially with the former, concerning this rental. He said that these two men took part in the decision to obtain a new copying machine. With regard to the role of the Print Shop Operator in this decision, the supplier came to the conclusion that he was initially opposed to the rental of the new model copier. "However," said the supplier representative, "when I showed him how the [new model copier] would help him run his department more efficiently, he felt that this equipment would [be a good thing.]" (There is no indication of such initial resistance from the Print Shop Operator by the three company respondents interviewed.) The supplier representative said that when he saw the need for increased speed in the reproduction of documents by the purchaser, he "got ahold of the [Director of Purchasing] and the [Assistant Director of Purchasing], and gave them a demonstration and...wrote a proposal." (The Print Shop Operator said that the Purchasing Department had contacted the supplier's sales representative to request a proposal, rather than the reverse, i.e., that the supplier was the initiator of his dealings with the purchaser company.) The supplier representative believed that the Assistant Director of Purchasing was the decision-maker with regard to choice of supplier, which corresponds to the information given by company persons concerning the key role of the Assistant Director in this choice. The supplier representative also said that he thought the purchaser obtained the copying unit from his company because they had received excellent service in the past and because the purchaser could fulfill its needs without having to make a capital investment or expenditure.

Purchase Decision Study
Survey Research Center*
University of Michigan

13. CASE STUDY: DECISION TO LEASE A COPYING MACHINE**

I. Purchaser

The purchaser is a mid-western-based corporation with several company divisions, most of them in the middle west. It prepares and packages foods. The bulk of its sales is in dairy products, both fluid and non-fluid. Purchasing is done both at a corporation and divisional level. Some divisions of the corporation have no separate office for purchasing and in such cases the Divisional Managers are responsible for purchasing. Centralized purchasing is done for services; for durable goods such as vehicles and packaging materials, common to all divisions; and for durable goods which, though not common for all divisions, are expensive. The corporate purchasing function is handled by one man, the Director of Purchasing, but persons employed in other capacities assist him for particular purchases about which they are knowledgeable. The purchase being studied was made for the division of the company which is located in the same city as the corporate offices.

II. The Product Obtained

The product leased was a copying machine which can make a copy of any document, letter or form on ordinary bond paper. It is used mainly for monthly financial and cost statements and to duplicate items where only a small number of copies are required. In the past, this work was done by a machine of another make which performed the job less efficiently and at greater cost.

III. How Need For Getting Product Came Up

The Comptroller, who also serves as Office Manager and supervises all office and accounting personnel, first recognized the need for a new copying machine in 1965 (he did not recall the month). He stated that "due to the volume of work, we had a lot of problems" and that confronted with this volume "you search for a faster method." He informed the corporate Director of Purchasing of the need, and they both discussed the problem with the General Manager of the division which uses the machine (physically located adjacent to the corporate offices.) The Comptroller also spoke with Vice-President-Treasurer about the need.

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*Interviewing for this study was conducted by the National Opinion Research Center, University of Chicago.

**For this case, it was not possible to obtain an interview with the supplier salesman involved. At the purchaser company, only the two key persons--the Director of Purchasing and the Comptroller--could be interviewed.

IV. Deciding To Get A New Copying Machine

The decision to get a new copying machine was made mainly by the Comptroller and by the Purchasing Director. The Comptroller said that "It was my idea to get a copying machine. I'm considered responsible to decide whether we need a new copying machine." He discussed the need for getting the product with the Vice-President-Treasurer, with the General Manager of the division which used the machine (in the same city as the corporate offices) and with the Director of Purchasing. The Director of Purchasing indicated that he also had a large role in deciding to get a new machine saying, "I carried the responsibility for the analysis and decision." He said he discussed the possible need for getting a new machine with the Comptroller and briefly with the General Manager of the concerned division.

When the subject was first discussed, there were some differences of opinion about the desireability of getting a new machine. The Director of Purchasing stated that "We thought we might be able to accommodate ourselves to [our] present piece of equipment." The Comptroller said that "the differences were only about timing, when we should get the copying machine, due to capital budget matters." However, he said, these differences were quickly resolved when, "due to the volume, the (present) machine overheated, and we were forced into action."

The machine was leased rather than purchased, the Director of Purchasing said because, in his opinion the manufacturers purposely make the purchase price so high that it is undesirable to purchase. The supplier wants to sell supplies and services, he said, and "doesn't want to tarnish its reputation with people who don't know how to maintain the equipment."

V. Selection Of The Supplier

Five suppliers of copying machines were considered. "We compared the cost of each of the different types of machines, the ability of the machine to do the job we needed, the reputation of the firm in rendering repair service," the Comptroller said. The Comptroller and the Purchasing Director discuessed the choice of a particular machine between themselves and the Director of Purchasing talked with the General Manager of the concerned division. The Comptroller also talked with the Assistant Purchasing Agent and with a man in each of two other organizations which use a copying machine made by the successful supplier (see "sources of information" section).

The main responsibility for selecting a particular type of machine was that of the Comptroller-Office Manager. "My judgment was final as to the particular type," he said. "It's my job as office manager. I generally decide what type of office equipment is gotten." Also influential in this selection was the Director of Purchasing whom the Comptroller consulted because he "had knowledge of the particular equipment."

The main responsibility

The Director of Purchasing expressed the opinion that this machine made "higher quality reproductions," and said the main reason it was chosen was the fact that it operated at lower cost. He commented that "the reputation of the company and the performance of the machine were far more important than any personal contact with the personnel of the company. We leased the machine in spite of the salesman--he was a poor salesman, inexperienced," the Comptroller laid equal emphasis on the cost, the ability of the machines "to do the job", and the reputation of the firm for giving repair services, as reasons for choosing the supplier.

The Director of Purchasing arranged for a sales representative of one supplier to meet with the Comptroller-Office Manager and himself. The Comptroller stated that "by the time [we] had practically decided to go ahead with (that supplier), so it was just a matter of discussing terms. Also, of course, we were shown in detail how the machine works."

A letter of agreement to lease the copying machine from the successful supplier was drawn up on October 31, 1966. The purchase order was signed by the Comptroller and by the General Manager of the concerned division.

VI. Sources of Information

The Comptroller received his information from several sources. Salesmen called on him, he received brochures through the mail and he "read about copying machines in business magazines." He said he saw things about office equipment in The Office; saw business news and saw relevant material (he couldn't recall specifically what) in the Journal of Accounting; was something "probably an ad, " by the successful supplier in the Wall street Journal; and saw a commercial by the successful supplier i on television. However, he felt his most valuable source of information was the "opinion of people who had actually used the equipment." As the people to whom he was referring, he mentioned the following as sources of information: 1) the Director of Purchasing who, he said, had arranged for the purchase of copying equipment on his former job; 2) the Assistant Purchasing Agent who, also in a previous job, had as one of his duties, operating a machine of this type; 3) the Senior Accountant of an accounting firm which uses the machine of the successful supplier and who "recommended it;" 4) an Internal Revenue Agent, whose office uses the copying machine of the successful supplier.

The Director of Purchasing said that he got information about this product and supplier from "word of mouth, trade magazines, sales representatives and personal experience. With regard to publications, he mentioned specifically Business Week and the Wall Street Journal, in which he said he saw general articles on copying machines and advertisements. He felt these puslications were his most valuable source of information "because of their factual content."

With regard to the "word of mouth" source of information, he mentioned "business acquaintances," explaining that while he didn't contact any such acquaintances concerning this particular purchase (and couldn't recall any specific persons) he had in the past talked aboutsuch matters with business acquaintances at such places as "lunch and on the golf course."

VII. Satisfaction With Purchase Decision

Both key respondents said that they were completely satisfied with the decision at the time it was made. The Comptroller-Office Manager said he had been satisfied because after they had "discussed all the different things about the machine, we felt it would do the job for us very well; also (Supplier's) reputation is very good." The Director of Purchasing stated that "the machine sold itself." He also remarked that the reputation of the supplier was good.

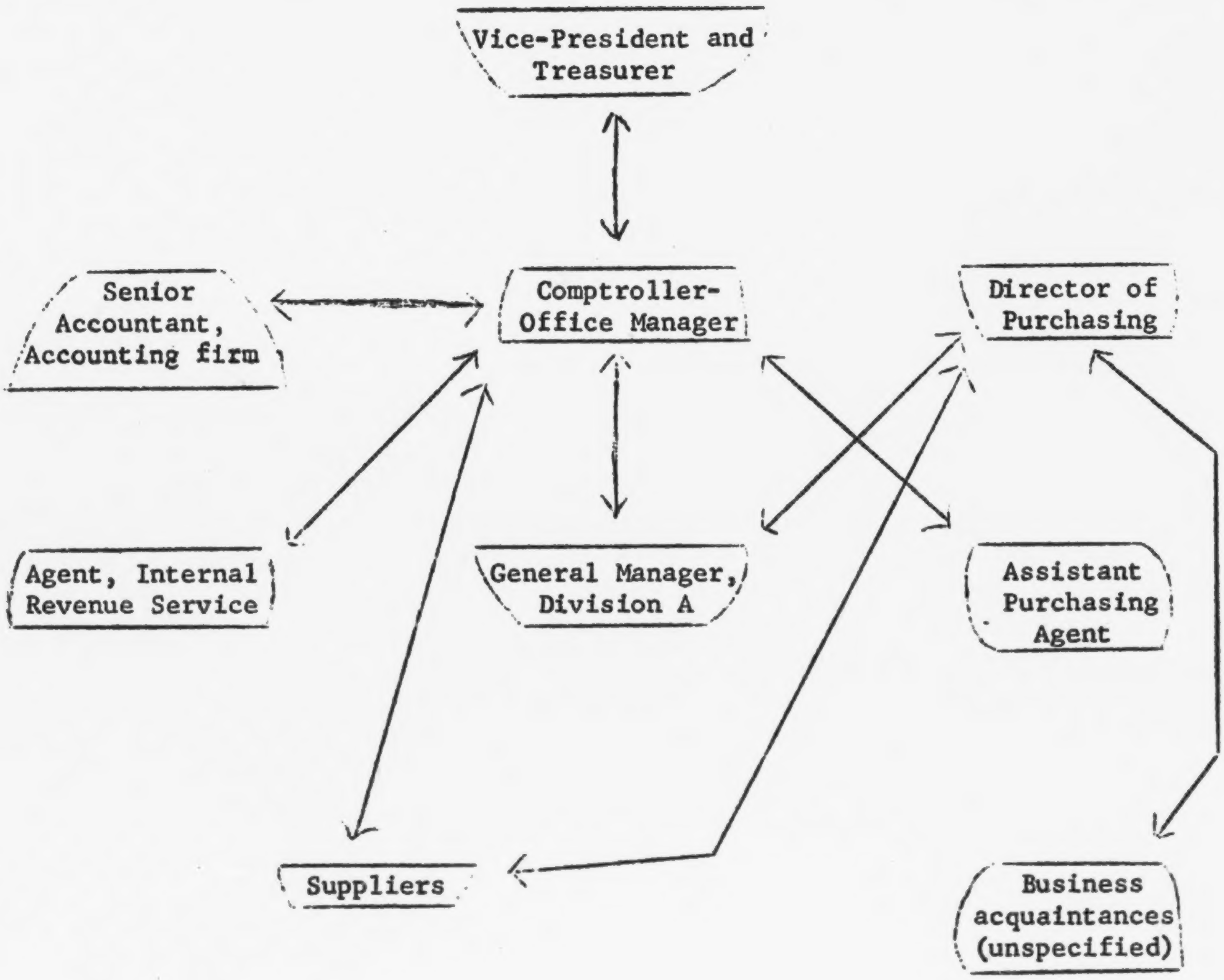
Both stated that they would make the same rental if the decision could be made over again. The Director of Purchasing felt that "in retrospect, the analysis was logical and the decision valid." The Comptroller-Office Manager stated that "so far the machine has done everything we expected of it. The maintenence service has been satisfactory."

VIII. Summary Of Persons Mentioned As Involved In Purchase

Top Management: Comptroller-Office Manager; Vice-President-Treasurer; General Manager, Division A	3
Purchasing: Director of Purchasing; Assistant Purchasing Agent	2
Others: Senior Accountant, Accounting firm; Internal Revenue Agent	2
Total	7*

*Also, unspecified number of persons with whom Director of Purchasing had spoken in past. Note also that possible other contacts of General Manager, Division A, of Vice-President-Treasurer, and of Assistant Purchasing Agent are undetermined, since it was possible to interview only the two key persons in this purchase case.

IX. Pattern Of Communications Concerning Purchase


Vice-President and Treasurer
Senior Accountant, Accounting firm
Comptroller-Office Manager
Director of Purchasing
Agent, Internal Revenue Service
General Manager, Division A
Assistant Purchasing Agent
Suppliers
Business acquaintances (unspecified)

14. CASE STUDY: DECISION TO PURCHASE A PRINTING CALCULATOR

I. Purchaser

The purchaser is a large midwestern-based corporation with plants in several parts of the country. The company does contract printing for magazines, books, and other publications.

Purchasing is done both at the corporate level and in each of six divisions. The corporate purchasing office, in addition to handling corporate purchases, is also responsible for many divisional purchases. All major equipment and material purchases are made by the corporate purchasing office. The divisions purchase such things as supplies, maintenance materials, and small replacement parts. Within the corporate Purchasing Department, which employs twenty-eight persons, are five groups, each responsible for different types of purchases. The group which handles the purchase studied in this report consists of a Manager, Purchasing Engineer and four Buyers and is responsible for equipment, maintenance and utilities.

II. The Product Obtained

The product purchased was a printing calculator to be used in the corporate Accounting Offices. The machine is a ten key calculator that prints on a tape, so that a permanent record can be kept. The machine multiplies, divides, adds and subtracts and is used mostly for preparing data reports. Before this machine was purchased, the work was done with a non-printing calculator and an adding machine.

III. How Need For Getting Product Came Up

In January, 1966, the Accounting Supervisor brought the need for a printing calculator to the attention of the Corporate Accountant, his superior. The need arose because of expansion of the corporation with a resultant greater volume of work in the Corporate Accounting Department, and also because a machine this department had been using was needed in another section. The Accounting Supervisor discussed the need with his superior, the Corporate Accountant.

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*Interviewing for this study was conducted by the National Opinion Research Center, University of Chicago. The Corporate Controller, the Corporate Accountant, the Manager of Systems and Procedures, and the Purchasing Manager were interviewed in April 1967. The Accounting Supervisor, who had been transferred to another city, and the supplier representative, could not be reached for interviewing.

IV. Deciding to Get A New Calculator

The Corporate Accountant, after discussing the matter with the Accounting Supervisor, agreed that a need did exist and approved a requisition from the Accounting Supervisor dated March 17, 1966. He then discussed the matter with the Corporate Controller and sent the requisition to him. The Corporate Controller approved the expenditure and, he said, "convinced the people up the line of its need." The "people up the line", whose approval was necessary, were the Senior Vice-President and the President. Though the Corporate Controller evidently had to justify the purchase to them, respondents agreed that the approval of both of these top management people was largely a formality. Another person who needed to approve the purchase, again largely as a formality, was the Accountant, Appropriation and Property Control.

The Purchasing Department had no part in the decision to buy a new machine. The Purchasing Manager, who handled the purchase, said that he was not consulted about the need for getting the product. "In our organization, the need is determined by the department itself," he said.

Among those who were involved in the decision to get a new calculator, there were no differences of opinion as to the desirability of making a purchase of this type.

V. Selecting A Supplier

One make of calculator had been used in the company. As the Purchasing Manager described the situation,"(Make A) had usually been our standard. We usually use things that have been standardized throughout the organization." Responsibility for setting standards rests in large part with the Manager of Corporate Systems and Procedures, Computer Services, who described himself as, among other things, "responsible for setting and maintaining standards on all equipment in the offices."

However, the Accounting Supervisor preferred Make B calculator, with which he had prior experience. According to the Manager of Corporate Systems and Procedures, the Accounting Supervisor was "dissatisfied with the speed of (Make A) and the add bar popped off and (he) felt it was poorly made." The Accounting Supervisor was, as the Purchasing Manager put it, "so determined in his preference that he got (the company) to sway a little from normal procedure."

The requisition initiated by the Accounting Supervisor reached the Manager of Corporate Systems and Procedures, whose approval of the type of equipment to be purchased was necessary. "They couldn't buy it without my approval," he said. The Manager of Corporate Systems and Procedures didn't think there was anything wrong with the Make A machine and didn't think it was necessary to change. Although the Purchasing Manager and the Corporate Accountant said that Supplier B's machine "has features that the others don't have," he believed that the Make B machine was no faster than Make A and that Make A's bar would stay on if replaced properly. Moreover, he did not wish to deviate from the standard of using Make A.

The problem "went clear up to the Controller," the Purchasing Manager said. "The Controller decided to deviate from the usual standard and try this machine... (he) ruled that the department could have the final say." At the request of the Controller, the Manager of Systems and Procedures approved the choice of Supplier B.

At the request of the Accounting Department, the Purchasing Manager has asked Supplier B along with several other suppliers to bring in their machine for a trial. Both the Purchasing Manager and the Manager of Systems and Procedures attended a demonstration of the machine. A purchase order for a calculator from Supplier B was placed on March 31, 1966.

VI. Sources of Information About Product and Suppliers

When asked how they obtained information about the product and about suppliers, people at the company gave the following information:

The Corporate Accountant stated that he received his information from the Accounting Supervisor and from the Systems and Procedures Department. He felt the latter source was most valuable.

The Corporate Controller said that he obtained all of his information from the Systems and Procedures Department. "I talked with them about what was available," he said.

The Purchasing Manager said that "when you've been in business as long as we've been, you just know all these suppliers." He said "They all send literature from time to time" and also that "We hear about them from others." However, asked whether he had gotten information from people outside the company, not counting suppliers, he said he had not.

The Purchasing Manager said he had gotten information from the accounting Supervisor "concerning the performance of the machine." He felt the Accounting Supervisor was his most valuable source of information. "He knew what it was and had used the machine before," the Purchasing Manager said.

The Manager of Corporate Systems and Procedures, Computer Systems, got his information from three sources: a detailed demonstration of the machine by the salesman of the company, the opinion of the Accounting Supervisor and the Buyer's Lab Report. He felt that the most valuable source for him was the Buyer's Lab Report "because they can test in a way that's impossible for us to do ourselves."

It may be noted that, of the four persons interviewed, all said that they had not received any information from persons outside the company and all except the Manager of Systems and Procedures said they had seen no relevant articles or ads in any publication. Unfortunately, the sources of information of the Accounting Supervisor (who could not be interviewed) are not known, with the exception of his reported previous experience with Supplier B's calculator.

VII. Satisfaction With Decision

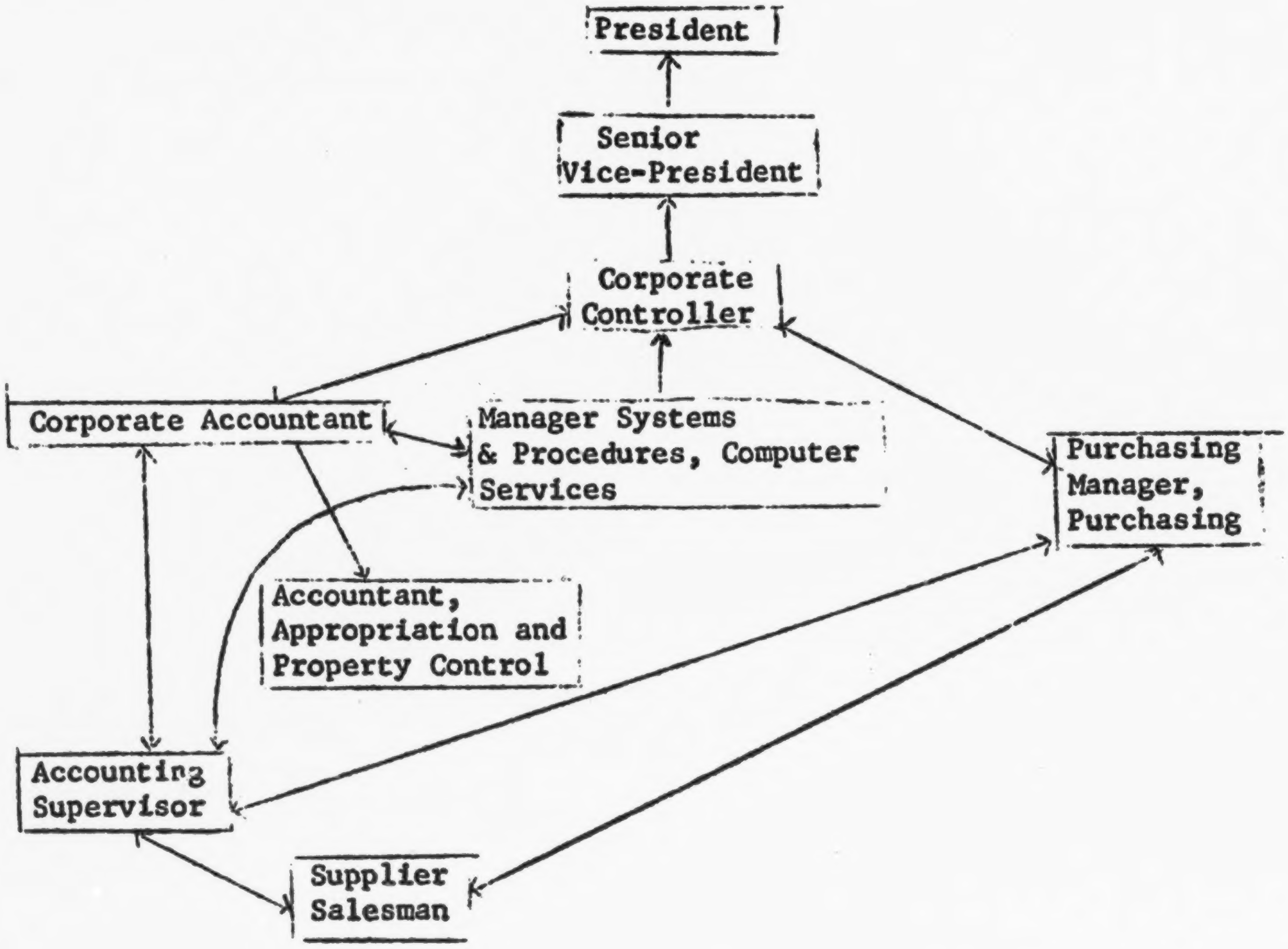
Three of the four people interviewed said they had been completely satisfied with the decision at the time it was made. One said he was satisfied because he "had faith in the judgment of those who wanted it." Another stated that he was satisfied because "Mr.---(the Corporate Accountant) explained why we needed it" and a third man felt that the new printing calculator "served our needs." However, one man said he had been "not too satisfied" because he disagreed with deviating from the norm - i.e., with buying a make other than what was generally standard for the company.

Asked whether, if the decision could be made over, they would be in favor of making the same purchase, three of the four answered yes. One said he would repeat the purchase because "it works and we have no problems with it." Another stated that "if the (Corporate Accountant) makes a request for a particular type of machine, it's because he's sure it will be a big help in his department." A third said, "I haven't had any complaints on the calculator, so no news is good news." However, the man who had not been too satisfied originally about the decision said he would not make the same purchase again. His reason was the same-i.e.,the deviation from the make generally bought by the company.

VIII. Summary of Persons Mentioned As Involved In Purchase Decision

Top Management: President; Senior Vice-President; Corporate Controller	3
Accounting: Corporate Accountant; Accounting Supervisor; Accountant, Appropriation and Property Control	3
Purchasing: Purchasing Manager	1
Technical Specialists: Manager, Systems and Procedures, Computer Services	1
Total	8

IX. Overall Pattern of Communications Concerning Purchase Decision


President
Senior Vice-President
Corporate Controller
Corporate Accountant
Manager Systems & Procedures, Computer Services
Purchasing Manager, Purchasing
Accountant, Appropriation and Property Control
Accounting Supervisor
Supplier Salesman

Purchase Decision Study
Survey Research Center*
University of Michigan

15. CASE STUDY: DECISIONS TO PURCHASE A BOOKKEEPING MACHINE AND A PRINTING CALCULATOR

Note: In investigating the decision to purchase a printing calculator for the Accounting Department of this company, information concerning both that purchase decision and a decision by essentially the same set of persons to purchase a bookkeeping machine for the same department was obtained. Data about both of these purchases is therefore presented below.

The Purchaser

The purchaser is one division of a large, nation-wide corporation which manufactures many different products, including automotive parts, electrical equipment, motors, and machinery. The particular division which made this purchase produces automotive parts and has many plants throughout the country.

Each division of the corporation is largely autonomous in its purchasing, with the exception of a few cases where national contracts are developed. The division Purchasing Department is responsible for co-ordinating the purchase functions of its various plants, and for its own offices.

I. Decision to Purchase a Bookkeeping Machine

A. The Product Obtained

The product is a bookkeeping machine used for accruing and paying of invoices in the Accounts Payable Section of the Accounting Department. It is used for large orders, to check bills sent by other companies. An inter-coupler which connects this machine to a key punch was purchased from the same supplier about a year after the bookkeeping machine was purchased. The inter-coupler permits the key punch to automatically punch out on cards the information which the bookkeeping machine produces.

B. How Need Came Up.

The Accounts Payable section had one bookkeeping machine prior to this purchase. Discussion of the need for another was initiated by the Accounting Supervisor, who heads this section. He explained, "Management needed extra information which we had available, but not in summary-type form. I knew this because this is my job here. No one needed to tell me we needed it. Management asked for information it would take weeks to prepare." He recalled this problem as having occurred in January 1966.

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*Interviewing was conducted by the National Opinion Research Center, University of Chicago. Interviews were conducted with the Accounts Payable Supervisor, mainly concerning the bookkeeping machine purchase, and with the Assistant Controller, the Purchasing Agent and the Director of Purchasing, concerning the printing calculator purchase, in January 1967. Additional interviews were conducted with the Controller and with a representative of Supplier A in April 1967. A representative of Supplier B could not be interviewed.

C. Deciding to get Product

The Accounting Supervisor discussed the need for an additional bookkeeping machine with his superior, the Assistant Controller, Automotive Division; with the Controller of the Automotive Division; and with a Corporate Controller. There were some differences of opinion about the desirability of making this purchase. These differences, the Accounting Supervisor said, were based on "the cost of the machine--we didn't know how much it would be." The differences of opinion were resolved, he said, by "mutual agreement that need was more important than cost...by discussion mostly."

The person who had the greatest influence on the decision to make the purchase, in the Accounting Supervisor's view, was the Assistant Controller of the Automotive Division. "It affected the whole Accounting Department, for which (the Assistant Controller) is responsible," he said.

Approval for the purchase had to be given by the "Finance Committee," which has the fuller title of Executive Committee on Capital Expenditures. This committee includes the President of the Automotive Division and two Corporate Controllers.

D. Choosing a Supplier

Only Supplier A, the same supplier whose equipment the department already had, was considered for this purchase, the Accounting Supervisor said. The Accounting Supervisor said that he had the greatest influence on the choice of the particular type of machine. "I'm the person that will use it--my department, that is," he said. He stated that he discussed the choice of the type of machine only with a man who is an accounting consultant to the company, working under the Automotive Division Controller.

The Accounting Supervisor listed five reasons for the choice of the particular bookkeeping machine. 1) "The ease of training people to use it;" 2) "The satisfactory operation of a machine we had doing a similar job;" 3) "The speed at which it operated;" 4) "(we're) able to check out the output of the machine--the machine checks itself;" 5) "Maintenance and repair are good." Asked which of these reasons was most important, he pointed to the factor that "we knew it would operate without problems." He added later that the "fast service" provided by the supplier was a very important factor in the choice.

The Accounting Supervisor talked with a salesman at Supplier A concerning "what we needed from the machine." The choice of the particular machine had to be approved by the Purchasing Agent, Purchasing Department, who is responsible for purchases in this category.

The purchase was made approximately at the beginning of 1966 and the intercoupler which connected the machine to a key punch was added in November 1966.

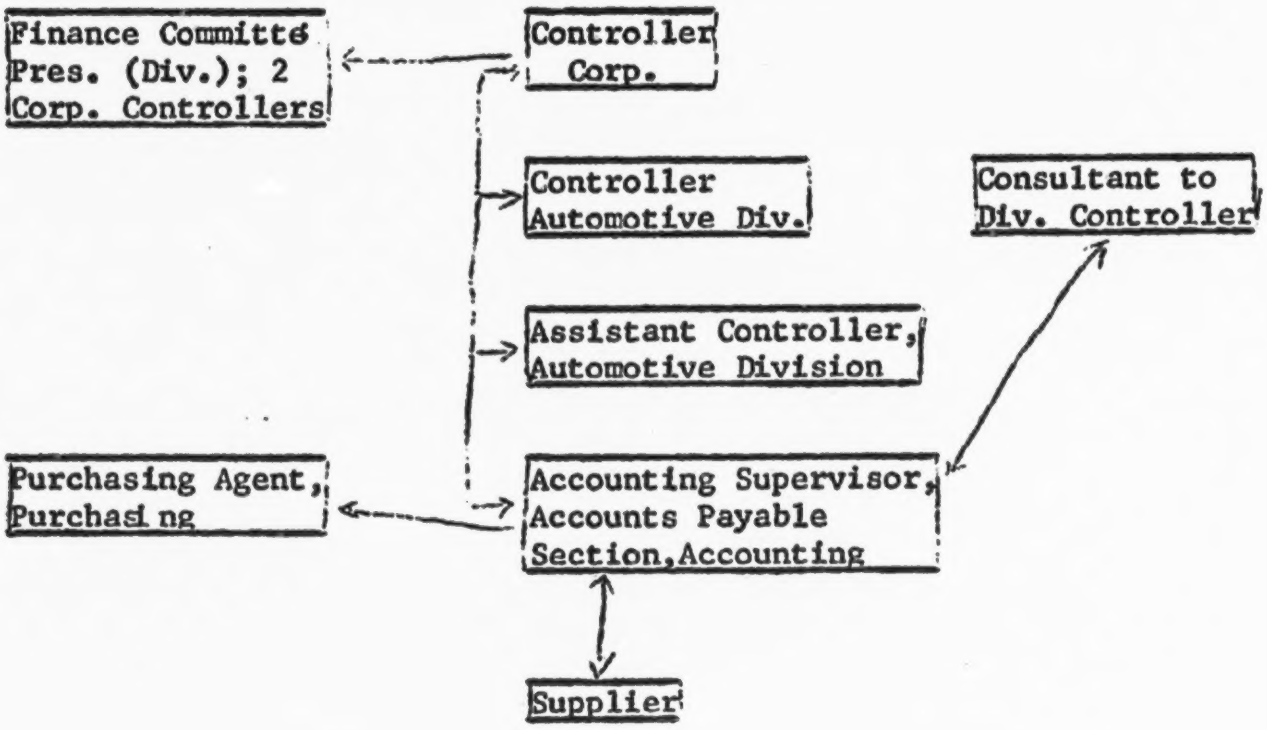
E. Sources of Information

The Accounting Supervisor said that he got information through telephone calls to the supplier sales representative. "I was most interested in service--getting the machine repaired if necessary; training people to use it. He said he did not get information from anyone outside the company or from the supplier (other than the accounting consultant mentioned above), and that he did not see any relevant articles or advertisements in any publications. Asked what source of information was most valuable to him, he said, "I had the one that was here--it was doing a good job but we needed another like it. I knew (the sales representative) from (Supplier A)--he worked with me."

F. Summary of Persons Mentioned As Involved in Purchase of Bookkeeping Machine

Top Management:	Finance Committee, President (Div.); two Controllers (Corp).	3
Finance:	Controller, Automotive Division; Assistant Controller, Automotive Division; Accounting Supervisor; Consultant to Division Controller	4
Purchasing:	Purchasing Agent	1
	Total	8

G. Pattern of Communications Concerning Purchase of Bookkeeping Machine


Finance Committe Pres. (Div.); 2 Corp. Controllers
Controller Corp.
Controller Automotive Div.
Consultant to Div. Controller
Assistant Controller, Automotive Division
Purchasing Agent, Purchasing
Accounting Supervisor, Accounts Payable Section, Accounting
Supplier

H. Supplier Perception of Purchase Decision

The Assistant Sales Manager of the supplier of the bookkeeping machine was interviewed. His responsibilities, he said, are "direction and supervision of all of our people necessary to market, install, and give good customer service." He said that one of his salesmen had been most involved in this sale and that his own role had been direction, with respect to customer service and in expediting the equipment to the purchaser company as quickly as possible.

Asked who he thought it was at the purchaser company who decided to buy a new bookkeeping machine, he said he did not know. He also said he didn't know who decided to buy from his company, but guessed that it was "the Controller, probably."

He noted that the purchaser company "was a user, they had other of our equipment." He thought they had bought from his company rather than from another supplier "because we have the finest equipment in the country. We are very well known in the industry."

II. Decision to Purchase a Printing Calculator

A. Product Obtained

The product purchased is a printing calculator. This machine is used to double-check invoices, to check total bills when there are a great many items bought at the same price, and to calculate percentages in figuring discounts. It does this work rapidly, using only a few steps or operations. This machine replaced a machine described by the Assistant Controller, Accounting Department, as "a comptometer, a very old calculator" plus adding machines. "Long lists of items had to be added individually at times; it was time-consuming," the Assistant Controller said. Also, the old calculator was, the Purchasing Agent said, beyond repair.

B. How Need Came Up

An increased work load in the Accounts Payable section of the Accounting Department prompted the head of that section, the Accounting Supervisor, to bring the need for a new calculator to the attention of his superior, the Assistant Controller, Automotive Division. The Assistant Controller recalled this as having occurred in the Spring of 1966.

C. Deciding to Get a New Calculator

The Assistant Controller said that he discussed the possible need for a new calculator with his superior, the Controller of the Automotive Division. The Assistant Controller said that the purchase was made on "my recommendation. (The Accounting Supervisor) is under me. He needed it in his department." The Controller indicated that there had been some doubt at first about the desirability of making the purchase. Discussion between the Assistant Controller and the Controller, the latter said, was "to see if the need was real--could they get along without it." The uncertainty was resolved, the Controller said, by "evaluation of the budget--the best benefit to the company. We decided we needed it and the budget allowed it."

While approval for the purchase was given by the Assistant Controller and the Controller, both attributed greatest influence on the decision to get the new calculator to the Accounting Supervisor who initiated the purchase. In explaining the reason for the Accounting Supervisor's influence, the Assistant Controller said, "I expect him to run an efficient department. He is one of the men under me and I can't expect him to do a good job without proper equipment." The Controller gave a similar reason for the great influence of the Accounting Supervisor on the purchase, saying "Because he's the one who has to get the job done."

Before the purchase was made, it was approved by the Manager of Facilities and Equipment and by the Executive Committee on Capital Expenditures, composed of two corporate Controllers and the President of the Automotive Division. The necessary approvals were obtained in July 1966.

D. Selecting a Supplier

The Accounting Supervisor had been given a "loaner" from Supplier A by "a salesman who came in off the street," in the words of the Purchasing Agent. This is the same supplier from which the department obtained its bookkeeping machines. The matter came to the attention of the Purchasing Agent when the salesman from Supplier A telephoned the Purchasing Agent and asked whether the company was going to purchase this "loaner" calculator.

The Purchasing Agent telephoned at least three other companies, however, and got additional "loaners." He indicates that four suppliers in all were considered. In addition, two other suppliers are mentioned by other persons as having been considered.

The Accounting Supervisor preferred the machine of Supplier A, the one which had provided the original "loaner." The Purchasing Agent said that Purchasing usually goes along with the brand wanted by the requestor but that, in this case, he urged the Accounting Supervisor to accept a machine from Supplier B. The reasons he had for preferring Supplier B were, the Purchasing Agent said, the "price angle" and "our experience with (Supplier B)." Of these reasons the most important he said was the past experience with Supplier B.

The Assistant Controller and the Controller of the division also became involved in the choice of the specific machine to be purchased. The Assistant Controller said he talked with the Purchasing Agent about the prices of various models. He also talked with the Director of Purchasing about the matter, according to the latter, although the Director of Purchasing left the matter completely in the hands of the Purchasing Agent. "The only problem was price--which was the best to get for the least amount of money," the Assistant Controller said. The Assistant Controller felt that the loaner which the Accounting Department had from Supplier A "was too sophisticated compared to the end result we needed." He noted that the Accounting Supervisor had preferred the more sophisticated machine and said that the differences of opinion were resolved "by discussion mostly." Supplier B was chosen, the Assistant Controller said, primarily because of price and also because they "offered an adding machine with the deal."

The Assistant Controller felt that he had the greatest influence on the type of machine selected. "I liked the idea of the adding machine," he said. "It was left to me to make the decision. My own boss went along with me." In the course of his deliberations, the Assistant Controller had contact with a salesman from the successful supplier to help him decide "whether or not I'd decide to buy it."

His superior, the Controller, said that, in addition to discussing the matter with the Assistant Controller, he had also talked with the Purchasing Agent. The Controller said that he "selected the complexity of the machine we bought because that determines the price...I made the final decision. It was really the price that determined it," he said. He said also that difference of opinion about the type of machine were resolved on the basis of cost and of the Accounting Supervisor's preference. He attributed greatest influence on the choice of the particular machine to the Accounting Supervisor because "his people use it; he's held accountable for the efficiency of his department." (The Controller did not refer to the fact, and perhaps was unaware, that the Accounting Supervisor's original preference for the more sophisticated machine was not met.)

A purchase order for the new printing calculator was sent out in July 1966. The machine was delivered in August 1966.

E. Sources of Information

Asked about the ways in which he got information about calculators or about suppliers of calculators, the Assistant Controller, Automotive Division, mentioned discussions with the Purchasing Agent and with the Accounting Supervisor. "Both (of them) had contact with suppliers," he said. "They knew the salesmen--what the different kinds of machines could do; prices." He felt that his most valuable source of information was the Purchasing Agent whom, he said, "Seemed to have the most information. He spoke with suppliers." The Assistant Controller said that he had not obtained relevant information from people outside the company, nor did he recall seeing any relevant materials in any publications.

The Controller, Automotive Division said that "I got it all (my information) from (the Assistant Controller) who explored this with the Purchasing Department and with (the Accounting Supervisor)." The Controller said that he had seen relevant advertisements in the Journal of Accounting and articles on new kinds of office equipment in Office Management. As his most valuable source of information, he named "the demonstration (of the machine)--the employees' ability to use it and feel comfortable with it. In this case, (the Accounting Supervisor)."

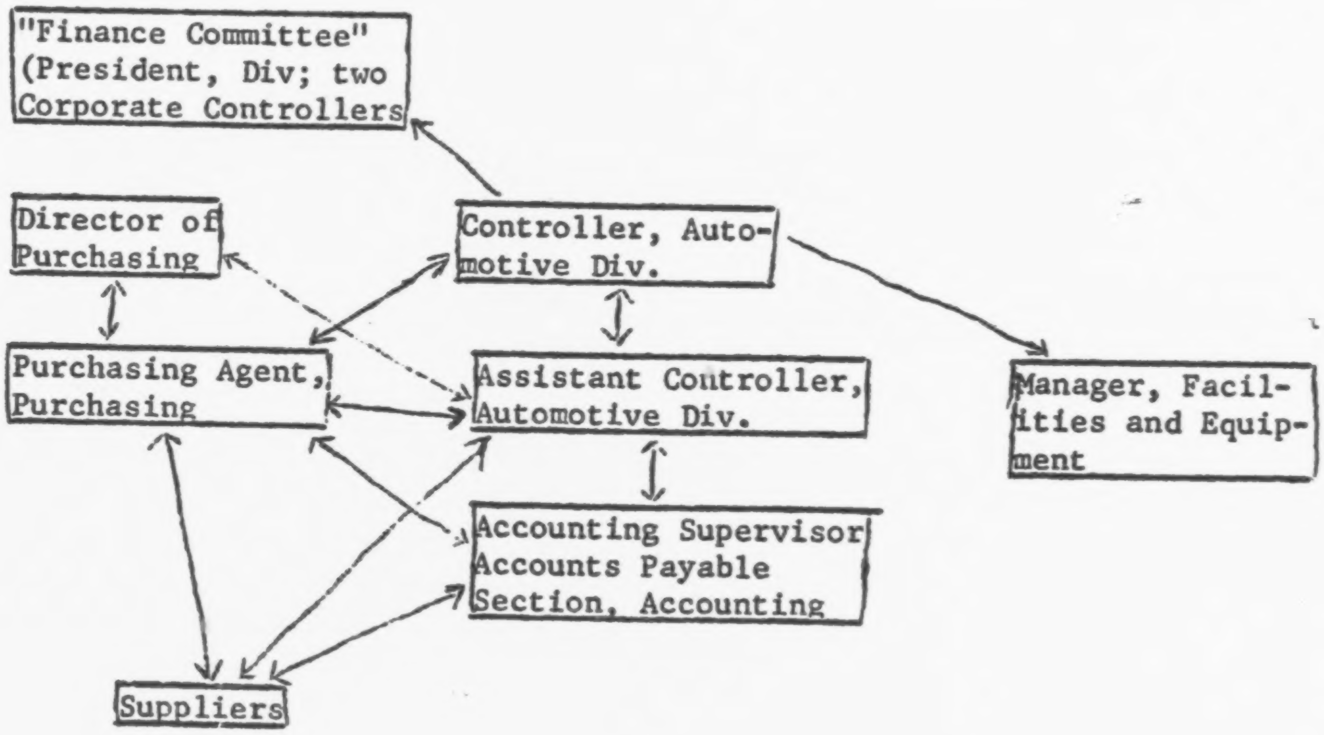
The Purchasing Agent said that he got relevant information from a salesman who had called on him about a month previously and by calling supplier companies which he asked for information and for "loaners." He said he did not get any information from people outside the company nor did he see relevant articles or advertisements in any publications. As his most valuable source of information he named "the salesman's information. He submitted his unit. Also, our experience with other (Supplier B) machines."

The division Director of Purchasing, who had little involvement in this purchase, said he had gotten relevant information from his assistant, the Purchasing Agent. He said this was his most valuable source of information "because he is responsible for making these decisions and I go by his advice." He said he had not obtained information from people outside the company but had seen advertisements in *Purchase Week* and in a business journal the name of which he could not recall.

F. Summary of Persons Mentioned as Involved in Purchase

Top Management:	Finance Committee--President, Automotive Div.; two Corporate Controllers	3
Finance:	Controller, Automotive Div.; Assistant Controller, Automotive Div.; Accounting Supervisor, Accounts Payable Section	3
Purchasing:	Director of Purchasing; Purchasing Agent	2
Other:	Manager, Facilities and Equipment	1
	Total	9

G. Pattern of Communications Concerning Purchase of Printing Calculator


"Finance Committee" (President, Div; two Corporate Controllers
Director of Purchasing
Controller, Automotive Div.
Purchasing Agent, Purchasing
Assistant Controller, Automotive Div.
Manager, Facilities and Equipment
Accounting Supervisor Accounts Payable Section, Accounting
Suppliers

Purchase Decision Study
Survey Research Center*
University of Michigan

16. CASE STUDY: DECISION TO PURCHASE AN ELECTRIC TYPEWRITER

I. Purchaser

The purchaser is the main division of a company which is primarily a designer and manufacturer of high quality organs and pianos. This division produces a large number of organ models and has several plants within the same city. The Purchasing Department of the main division, where this study was done, employs eighteen persons. The division is completely responsible for its own purchasing.

II. The Product Obtained

The product purchased is an electric typewriter used by the Secretary to the Director of Public Relations in the main division of the company. The machine is used for typing letters and master sheets for quantity reproduction. One specific use is for typing reports which go to financial associates and stockholders. For this reason, as the Office Services Manager, Data Processing Department, commented, the machine is one "which must be kept in top order." A similar machine, of the same make, was used prior to the purchase.

III. How Need For Product Came Up

All master copies typed on the typewriter used in the Public Relations Department are sent to the Off-set Duplicating Department. In June, 1966 the Off-set Duplicating Supervisor noticed that copies being obtained from masters typed on this typewriter were not adequate and notified the Office Services Manager about the matter. "He was getting poor copies" the Office Services Manager said. After investigating this problem, including disucssing the need with the Secretary to the Public Relations Director (i.e., the woman using the typewriter), the Office Services Manager in early July called in a man from the former supplier "to give me an estimate on repair." The supplier representative told him that the entire key mechanism would have to be replaced and quoted a "high figure" for this repair work, he said. The Office Services Manager checked on the past repair bills for the machine, and considering these along with the costs of additional repairs, "decided a new machine was preferable." "If the cost of repair hadn't been so high," he said, "we'd have repaired it."

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*Interviewing for this study was conducted by the National Opinion Research Center.

IV. Deciding To Get A New Typewriter

Having concluded that purchase of a new typewriter was desirable, the Office Services Manager then had to have, in his words, "quite a series of approvals here"for his recommendation. On June 28, 1966, he sent a purchase recommendation to his superior, the Data Processing Manager, stating the item to be purchased, the dollar value, and the reason for the purchase. This requisition sent to the Data Processing Manager was also signed by an officer in the Public Relatins Department, which would use the machine. The Data Processing Manager can, the Office Services Manager explained, "send the requisition on for further approval or send it back for further clarification." In this case the Data Processing Manager approved the recommendation. The Data Processing Manager said that it was his role to decide "whether it was completely justified." "This was a special need for (Public Relations Director)," he said.

The Data Processing Manager, having approved the purchase recommendation, then sent it on to the Executive Vice-President. The Executive Vice-President noted that "I could have vetoed the requisition if there was any question about it. As it was I okayed it." He said he did not discuss the decision to buy with anyone--it being the Office Service Manager's "province," but commented that the repair records on the machine indicated the need for replacement.

After the requisition was approved by the Executive Vice-President, it was forwarded to the Budget Manager (no longer with the company), who approved the expenditure, and then was sent on to the President. The President could recall very little about the purchase and his approval, unlike that of the Executive Vice-President, was indicated by a key informant to be just a formality. "I accept the word of responsible people. I must," the President said.

All four persons interviewed (Office Services Manager, Data Processing Manager, Executive Vice-President, and President) agreed that the Office Services Manager had the greatest influence on the decision to get a new typewriter. "This is his direct responsibility," the Data Processing Manager said. "He has control over all typewriters and makes evaluation on repairs...on all office equipment."

The influence of the Office Services Manager on such purchases is evidently considerable enough so that sometimes he tries to eliminate the delays due to the necessary series of approvals. "In many cases, I short-shop," he said. "I get the equipment in faster by talking to the salesman. I tell him the requisition is in but I need the equipment immediately. On some salesman, I call Purchasing, get a purchasing order number and advise them of my requisition number so they can tie it together. This way the salesman can bring in the equipment next day and we cut delay." In this case, however, the more regular full procedure was followed. The purchase order was issued by a Buyer in the Purchasing Department on July 15, 1966.

V. Selecting A Specific Supplier And Model

While a number of suppliers make electric typewriters, the company did not consider anything other than the successful supplier's product. "We have standardized on (Supplier A) on typewriter," the Office Services Manager said. "The actual decision was made prior to my coming here but I myself have found (Supplier A) to be most satisfactory and we get excellent service. The longevity of machine--fine craftsmanship--is another factor. The utility-per-dollar value is exceptional." In further explaining the advantages he saw to standardization, he said "It cuts down the number of people for repair. ...I had several companies offer service. I am a firm believer in dealing with the original company. Repair may be more but it is better and faster."

The standardization on Supplier A for electric typewriters got spontaneous support from the Executive Vice-President who commented, "I have a long-standing feeling about the serviceability of (Supplier A) equipment...I approve (Supplier A) equipment."

However, the standardization appears to be less than completely inflexible because the Data Processing Manager mentioned that the Office Services Manager consulted him about the choice of supplier as well as about the type of machine to be purchased.

The Office Services Manager was the only person at the company who had contact with the salesman from the successful supplier. As mentioned, he called in a salesman to estimate the cost of repair on the older machine. The salesman offered to lend the purchaser a machine while theirs was being repaired. However, after the repair estimate had been made, the salesman suggested that the purchaser buy a new machine rather than repair the older one. He said that the machine could be repaired but that it could not be repaired to the level of excellence required. Apparently, the Office Services Manager felt complete confidence in the word of the salesman. He described him as "...one of the finest salesmen I have ever met. His approach to my problem is not a sale for sales' sake." The Office Services Manager further added that the salesman analyzed his problems and got to the point "with my interest at heart."

The Office Services Manager noted that standardization on a single supplier was not necessarily the rule in his company. "On a copy machine, I have investigated about twenty different companies," he said.

VI. Sources of Information About Product and Suppliers

The Office Services Manager had had considerable experience with this specific type of equipment in the past. At one time he was a typewriter repair man and consequently had an unusual amount of knowledge about typewriters. He had also visited plants of two suppliers. He said further that he had received information about typewriters from "members of the American Management Society." "I get together with other office managers and talk over problems and equipment," he explained.

Asked whether he had seen relevant materials in any publications, he said "Not on this product. But, if I see something, I send for further information. I usually consult Office Management and Administrative Management. Such publications, he said, "usually have complete breakdowns on office equipment. I consult it often to help make decisions on much equipment."

For this particular purchase, however, he felt that his most valuable source of information was the representative from the successful supplier, of whom he thought so highly.

The Data Processing Manager said that he got information relevant to the purchase "through my association with offices" and, more specifically, from the Office Services Manager. He felt that the latter was his most valuable source of information "because it's his job to know what's needed and what is most suitable."

The Data Processing Manager said that he had seen relevant materials in several publications: Data Processing Magazine, Business Automation and Modern Office Procedures. He mentioned specifically seeing typewriter evaluations. They "pick a piece of machinery and make complete evaluations on all makes."

He said also that he had discussed typewriters with "people in the field" (i.e., data processing). "I must be aware of typewriters generally" he said, explaining "typewriters are becoming more closely associated with data processing because they are used as input to computers."

Both the Executive Vice-President and the President, both emphasizing their lack of direct responsibility for the purchase, said that they had obtained no information about typewriters or typewriter suppliers.

VII. Satisfaction With Decision

All the respondents said that they had been completely satisfied with the decision at the time it was made. The Office Manager said he felt satisfied because the trade-in allowance was sufficient and "I got exactly what I look for." The Data Processing Manager said that he was completely satisfied since the need for the typewriter was evident and the make of the machine was standardized equipment for the company. The Executive Vice-President said he felt satisfied because of his "long standing feeling about the serviceability of Supplier A's equipment." The President said he had been satisfied because he accepted the word of the persons concerned in the purchase.

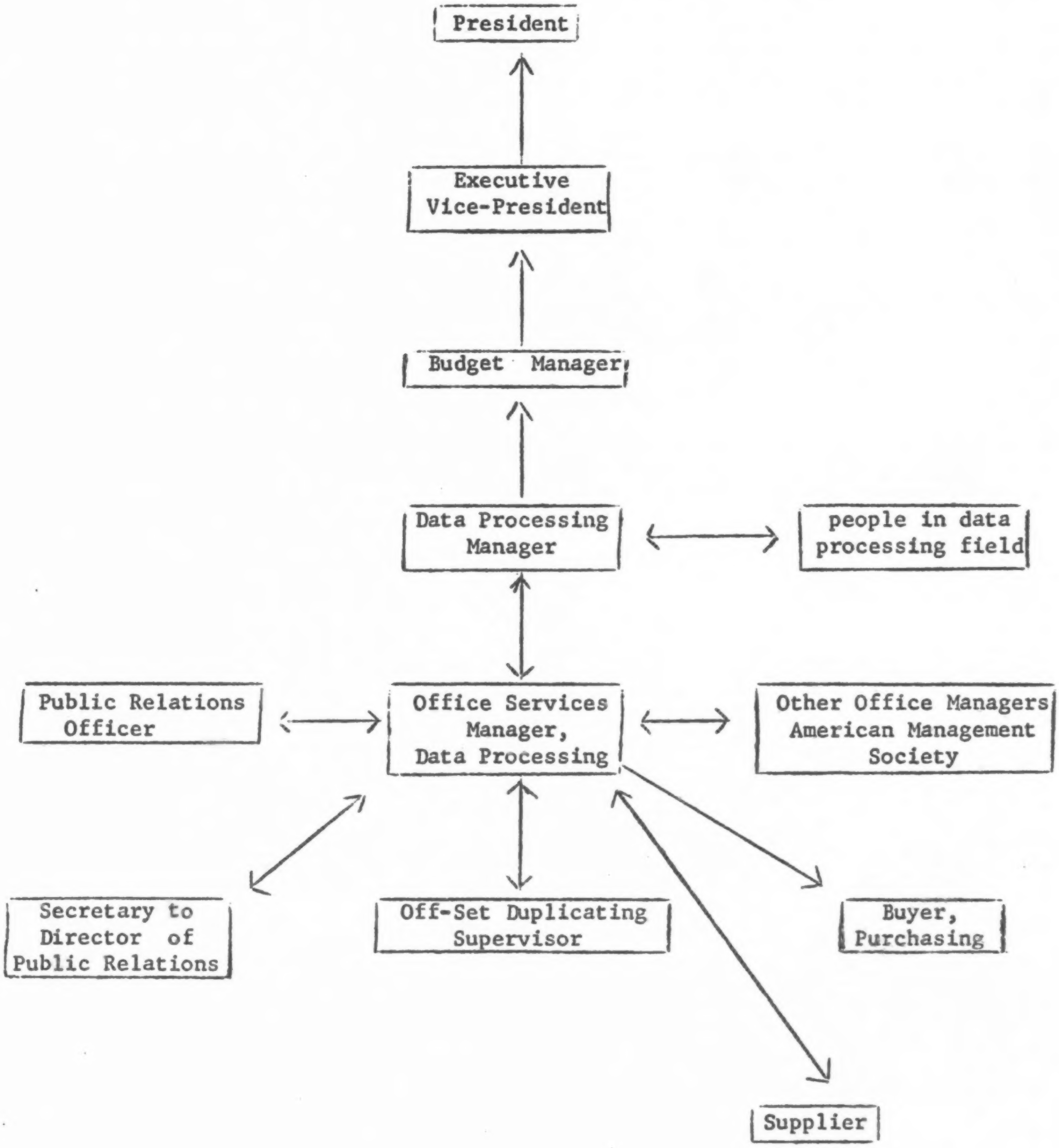
All of the respondents indicated that they would be in favor of making the same decision again.

VIII. Summary Of Persons Mentioned As Involved In Purchase*

Top Management:	President, Executive Vice-President	2
Services:	Data Processing Manager, Office Services Manager, Off-set Duplicating Supervisor	3
Public Relations:	Public Relations Officer, Secretary of Director of Public Relations	2
Financial:	Budget Manager	1
Purchasing:	Buyer	1
	Total	9*

*Also mentioned as sources of information, though not directly in this case, were an unspecified number of other office managers spoken to from time to time by Office Services Manager and an unspecified number of people in the data processing field spoken to from time to time by the Data Processing Manager.

IX. Pattern Of Communication Relevant To Purchase


President
Executive Vice-President
Budget Manager
Data Processing Manager
people in data processing field
Public Relations Officer
Office Services Manager, Data Processing
Other Office Managers American Management Society
Secretary to Director of Public Relations
Off-Set Duplicating Supervisor
Buyer, Purchasing
Supplier

X. Supplier's Perception Of Purchase Decision

The supplier salesman involved in this purchase said that he had contact only with the Office Services Manager concerning this purchase. "I made a call at the company--I initiated the particular purchase," he said.

Asked who he thought had decided to buy a typewriter at this time, he mentioned the Office Services Manager, the Data Processing Manager and the Executive Vice-President. These were, in fact, the key people involved. He said he thought that it was the Office Services Manager who decided to buy from his company--again substantially correct. He attributed this choice to the fact that "service is fast and perhaps the most important factor with (his supplier company)...We attempt to give service in depth, and that perhaps is why (purchaser company) chooses our product." When asked how people at the purchaser company knew about his own company and its products, the supplier salesman said that the Data Processing Manager had "been at our schools" and that the Office Services Manager had visited their plant and had been involved in seminars conducted by the supplier company.

Purchase Decision Study
Survey Research Center*
University of Michigan

17. CASE STUDY: DECISION TO PURCHASE AN ACCOUNTING MACHINE

I. Purchaser

The purchaser is one of four divisions of a large midwestern corporation. This division manufactures a variety of types of printing presses, as well as carton-making equipment. Purchasing is handled by the division itself, except for purchases over $50,000 (capital expenditures) which must be approved at a corporate level. The Purchasing Department for the division employs a total of 13 persons.

II. The Product Obtained

The product, which is an accounting machine, keeps a record of accounts receivable and was purchased for the Repair Billing Department. The machine posts debit and credit to customer's accounts in a simultaneous operation, producing a monthly statement. It is also used to obtain an automatic trial balance, and it enables the company to know at the end of the month whether or not all figures are recorded. Before this product was purchased, another similar machine was used; however, it was less automatic (it involved mostly manual posting) and took more time to operate.

III. How Need For Getting Product Came Up

In about May, 1966, the Bookkeeping Operator, Repair Billing section, recognized a need for this product. The posting machine she was using at the time was quite old and worn out. In fact, things had reached the point where the old machine was virtually inoperable. The Bookkeeping Operator contacted the Supervisor of the Repair Billing section about the problem. He, in turn, spoke to the Office Manager, Operating Controls Department, whose responsibility is, as he puts it, "supplying the tools of the office from a computer down to a paper clip." All of the persons mentioned are in the Administrative branch of the division, which is responsible for accounting and other financial functions.

Summary: Number Of Persons Involved In Discussion Of Need	
Financial	3

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* Interviewing for this study was conducted by the National Opinion Research Center

IV. Deciding To Get A Product In This Category

After the Office Manager, Operating Controls Department, was told by the Supervisor of Repair Billing, about the need for a new machine, he filled out an appropriations form estimating the cost of the purchase and giving reasons for requesting it. He also made an appointment for a demonstration with a supplier of accounting machines. This particular supplier has been providing office machines to the company for many years. Since the machines and the supplier's service on them has proved very satisfactory, the Office Manager first contacted this supplier.

Three persons (the Office Manager, Operating Controls Department; the Supervisor, Repair Billing Department; and the Bookkeeping Operator, also of Repair Billing) went to the supplier's office for the demonstration. The Office Manager then consulted the Controller about making the purchase. The latter was in favor of buying a new accounting machine since the only other alternative would have been to use the computer. The Controller decided that the computer could not be spared for posting. Also consulted by the Office Manager was the Vice-President, Administrative, who decided that the company would not switch over to any new billing machine systems since the time needed for installation would be too great. On the other hand, an accounting machine could be used immediately.

The Office Manager gave particular attention to choosing the accounting machine eventually purchased because, as he put it, "It's a very important operation--15,000 postings and $100,000 a month. Without proper control, you can see the possibility of mishandling. We like to feel that when we bill a customer, we're correct." The Vice-President, Administration, had to authorize the expenditure, as well as sign the requisition (June 1, 1966). Signing the purchase order on the same day were the Director of Purchasing and the President of the Company (both just as a formality, however.)

Summary: Persons Involved In Decision To Get Product In This Category	
Financial	4
Purchasing	1
Top Management	2
Total	7

V. Selecting A Specific Type Of Product And A Supplier

Several potential suppliers, each making more than one type of product, were available. However, only two such suppliers were actually considered. Actually, only Supplier 1 seemed to be seriously considered. The purchaser company had used this supplier's products for many years and was quite satisfied. Also, Supplier 1's accounting machine had automatic features which Supplier 2 could not furnish.

As described earlier, three people (the Office Manager, Operating Controls Department, and the Supervisor and Bookkeeping Operator of the Repair Billing section)all went to Supplier 1's office for a demonstration of a billing machine. The Office Manager, Operating Controls, then spoke to the Controller and the Vice-President, Administrative, about the choice of a particular billing machine. He also discussed this choice with the Supervisor of the Repair Billing section, and the Bookkeeping Operator who would be operating the new machine. It was the Office Manager who made the final decision to get Supplier 1's machine. His recommendation concerning a supplier was in accord with the opinions of the others who discussed this matter.

Summary: Number Of Persons Involved In Choice Of Specific Product And/Or Supplier

Financial	4
Top Management	1
Total	5

VI. Sources Of Information About Product And Suppliers

The Office Manager Operating Controls Department, lists several technical publications (Buyers Laboratory, Update, and The Office), certain business shows (the Business Equipment Machine Organization shows), his own investigations into products and suppliers, and the operator's manual for the accounting machine that the company eventually purchased, as his sources of information. He felt that the operator's manual was his most valuable source.

The Bookkeeping Operator, Repair Billing Department, states that the company had used this supplier's machines before, and that she was currently using one. She felt that her most valuable source of information was actually operating the various types of new machines and comparing their different features at the supplier's demonstration.

The Director of Purchasing did not receive any information bearing specifically on this purchase until he received a requisition for the new accounting machine. However, he felt that his most valuable source of information about this type of product was a testing service report.

VII. Satisfaction

Those interviewed said they had been "completely satisfied" with the decision at the time it was made. The Office Manager felt that "no better product existed on the market." The Bookkeeping Operator stated she was satisfied because she was "looking forward to getting a new machine after having considerable trouble with the old one." The Director of Purchasing, though he had not been consulted about this decision, felt quite satisfied because he felt that the product purchased was the best possible choice.

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All three respondents also said they would make the same decision if they had to do it over again. In explaining his feeling about this, the Office Manager cited the Manufacturer's guarantee of 100 hours of service labor. The Bookkeeping Operator gave the new machine's adequate performance as her reason.

Summary Of Persons Involved In Any Phase Of Purchase

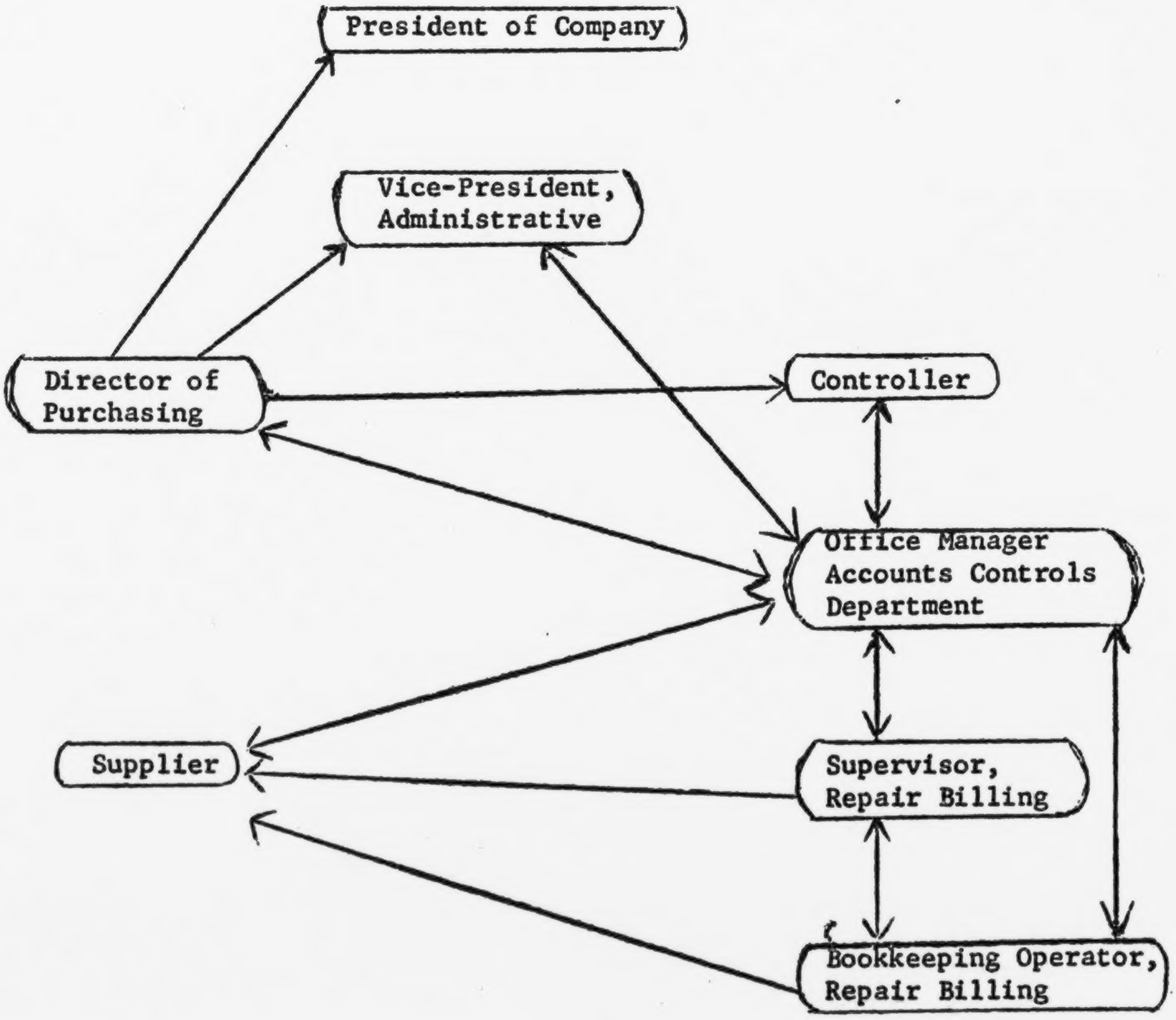
Financial	4
Purchasing	1
Top Management	2
Total	7

VIII. Supplier's Perception Of Purchase Decision

The salesman from the supplier said that he had had most contact with the Office Manager, Operating Controls Department, and with the Supervisor of the Repair Billing Department. Asked who he thought it was who took part in the decision to buy an accounting machine at this time, the salesman mentioned the Office Manager, the Supervisor of Repair Billing, and the Vice-President, Administrative. These were, in fact, key people, though not the only ones involved in the decision.

When asked who he thought decided to buy the product from his company, rather than from another supplier, the salesman said that it was the Vice-President, Administrative. (Although the Vice-President did authorize the expenditure, he had not actually chosen the supplier.) Finally, the salesman suggested that the purchaser company bought his product because, "We had the better product and the better system--we were able to provide a 30% increase in speed."

IX. Overall Pattern Of Communications Concerning Purchase


President of Company
Vice-President, Administrative
Director of Purchasing
Controller
Office Manager Accounts Controls Department
Supplier
Supervisor, Repair Billing
Bookkeeping Operator, Repair Billing

18. CASE STUDY: DECISION TO LEASE A COMPUTER

I. Purchaser

The purchase company is a large organization which manufactures a variety of products for industrial use, including such products as power cranes, ball bearings, and coal preparation equipment. The company has plants throughout the country. Its corporate headquarters are in a midwestern city and the company also has two engineering plants in the same city. The computer was leased for use by the corporate offices and by the plants in its immediate area. The computer is housed at one of the engineering plants in the headquarter city. This plant produces primarily moving and processing equipment.

Each of ten plants in the company has its own purchasing office and handles its own purchasing independently. There is also a purchasing office at the corporate level for purchases at the corporate level.

II. The Product Obtained

The product obtained was a third generation computer, which was leased along with some peripheral equipment. The peripheral equipment was pneumatic tubing, that feed four departments (Engineering, Accounting, Purchasing, Production) into the new computer. The computer is used for technical computations, including engineering specifications, cost estimation, and production planning and scheduling. Sales statistics and potential sales forecasts, payrolls, mailing lists and inventory control computations are also made on the new computer, For some plants the computer can be used in making price lists, for order-writing, invoicing, and for accounts receivable and payable. Since the company is a multi-plant organization, the computer can also be used for centralized reports.

III. How Need For Getting Computer Came Up

The need for the new computer was first discussed seriously in April of 1964, although it might be considered an outgrowth of the first computer installation at the company in 1962. The need for the computer was not recognized by any one individual, but was generally discussed among the company's management personnel.

As the Data Processing Manager explained, the purchaser had several smaller scale computers (made by the successful supplier company) before this new computer was leased. He went on to explain that new applications were continually being put on these smaller computers but that these computers had "certain limitations." At this time, the successful supplier was just coming out with a new model computer and sent one of their representatives to the purchaser company. The supplier representative, in a way, then, initiated serious discussion about obtaining a new computer.

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*Interviewing for this study was conducted by the national opinion research Center, University of Chicago. Interviews were conducted during the period of January through March 1967 with the persons who are starred on the communications diagram.

In the beginning, much of the discussion took place on a purely informal level. When the idea actually began to take shape, however, meetings were held on a more formal basis. The former Plant Accountant was regarded by several of the respondents as having "led the way," although other persons from Engineering and Production helped to initiate early discussions. The former Plant Accountant first discussed the need with the Divisional Engineer in charge of technical computer operations and with the Special Projects Engineer and further consulted the Data Processing Manager. The Divisional Engineer and the Special Projects Engineer also discussed the need for the computer with the Plant Manager, who spoke to the Shop Superintendent, to the Data Processing Manager and to the former Plant Accountant. The Chief Engineer, who helped encourage these early discussions, spoke about the possibility of leasing a computer with the Vice-President of Engineering, with the Plant Manager, and with the present Plant Accountant, and was consulted by the Divisional Engineer. The present Plant Accountant discussed the matter with the Manager of Computer Operations, with the Controller, and with the Chief Engineer.

Most respondents suggested that no single individuals could be pinpointed as having first recognized the need for the computer. The present Plant Accountant said that recognition of the need "was a combination of thought among the company's management." The Data Processing Manager noted that there were approximately twenty to twenty-five meetings held, avaeraging about six to ten persons, (apparently primarily those mentioned) during which only the need for the computer was discussed.

IV. Deciding to Get A New Computer

Because the decision to install a computer is such a major one and requires so much research, many persons were involved in one way or another in the decision. Thirteen persons were specifically mentioned by respondents as having contributed to the final decision.

The first step was an effort on the part of a number of management people to determine the economical and practical advantages of leasing a larger model computer. For one year, apparently from about July 1964 to October 1965, plant personnel made what they call "economic feasibility studies." Informal reports were written up during the year and formal ones presented at the end of the study.

Several people were involved in this research. The Manager of Computer Operations (Corporate Offices) was one of the persons who, as he put it, "helped with the feasibility study-with reviewing various manufacturer's computers." He also "determined what new applications could be put on and the determination of doing these applications in a better way than we were doing them." The Data Processing Manager was also involved in these studies, working primarily on the computer's value in regard to commercial applications. The Plant Manager, the man who was Plant Accountant at that time, the present Plant Accountant, the Chief Engineer, and the Divisional Engineer also worked on the economic feasibility studies.

The Plant Accountant (as of that time) was extremely influential in the decision to lease the computer and felt strongly that it was needed at the company. As he put it, "We couldn't live with our prodcution control system. The simplest approach to give better customer service was through a better production control system. Also...it was very necessary to have this computer in engineering... to give optimum design and price to our customers."

The Chief Engineer was equally concerned that the company install a computer. He believed that its main advantages were "cost savings [and] accuracy." He thought that it would bring about "better service to sales organization as well as our customers." He added that a computer also makes the job of engineering less boring."

The Chief Engineer indicated that the Divisional Engineer also had a great deal of influence on the decision. He said("The Divisional Engineer's) judgment and knowledge would influence me to a great extent. He is in charge of computer operation for Engineering. His enthusiasm and conviction that this is the thing to do in general. We both believe that a company of our type a and also many, many other companies that do not have a computer complex are out of date at the present. He and I were both parallel in all problems concerning the situation." The present Plant Accountant, who also contributed to the final decision, felt that "product improvement and cost reduction were the prime considerations" in the decision to lease the computer.

Differences of Opinion. However, feelings were mixed among management personnel as to the value of a new computer. The Manager of Computer Operations, who spoke with all the managers of the various departments (sales, engineering, purchasing, personnel and production)at the corporate level*, indicated that there was some difference of opinion on whether the computer should be leased. He said that some people did not feel that the work that had to be done could be done on a computer. Some felt that it could be done more economically manually. Others, he said, felt that there would be a loss of jobs, and some would have liked to have seen the work done just as before. In addition, the Plant Manager, who attended meetings on the subject with the Data Processing Manager, and the former Plant Accountant, commented, "We all don't believe the accomplishments will be as great as some predict. It might cost too much for what you get out of it. You might spend a great deal more on programming than you expected. The results might not be as glowing as some predict."

Reasons for Decision. But in general, the respondents felt that the anticipated cost savings and better customer service were overriding considerations. The present Plant Accountant felt that "product improvement and cost reduc reduction were the prime considerations" in the decision to lease the computer. In addition, accuracy of design, better scheduling for delivery, more efficient control of the operations and production control system, as well as the fact that engineers are hard to get, were mentioned as factors which all contributed to the final decision to lease the computer.

*The Manager of Computing Operations appeared to be referring to persons at the Corporate level, where he himself is. He could not be reached for confirmation, being on an extended vacation.

After the one year study concerning the desirability of the leasing, formal reports were written up and presented to the Plant Manager of the plant at which the computer was to be located and at which data processing is done for the executive office and plants in that city. It was his job to evaluate the reports and to weigh the various differences of opinion. He commented," I had to resolve them. I had to list them and then make up my mind which way to go." After studying the reports carefully it was the Plant Manager's opinion that the "advantages outweighed the disadvantages."

Before the decision could be made final, approval had to be secured from the Controller, from the Vice-President of the Treasury Division, from the Vice-President of Engineering, from the Executive Vice-President and from the President. The Chief Engineer and the former Plant Accountant who at that time was in charge of the current computer and has been described as the "spark plug of the whole computer activity," were responsible for "selling" the computer idea to their Controller, who cleared it through the Vice-President of the Treasury Division, The former Plant Accountant and the Chief Engineer also helped to convince the Vice-President of Engineering who felt that "cost saving and accuracy of design" were the principal considerations. He said "that the study the plant made convinced me it would be a cost-saving arrangement." Finally, the proposal to lease the computer was presented to the President and to the Executive Vice-President for approval.

V. Selecting A Specific Type of Computer And A Supplier

Out of a number of possible suppliers, the purchaser company considered five, requesting that each provide specifications on their computer, on the price, and on the potential of the computer to fill the company's future needs. As the former Plant Accountant described it, "We called in [Supplier A, B and C.] We gave them an example of the engineering application. They were to tell us how this could be done on their computers."

Studies were made which evaluated various manufacturers' computer models with respect to the purchaser's applications and specifications. Thee decision on the type of computer and on the supplier were made simultaneously. The successful supplier was considered most seriously since as the Plant Manager explained, "they are leaders in the field--more experienced." The Data Processing Manager and the Plant Manager, among others, contacted other plants using similar equipment made by the successful supplier " to see what they were doing" and "to see what they thought of it."

The Plant Manager was concerned with both the type of computer and the supplier. He spoke with people in Engineering, Production and Accounting and with some of the successful supplier's top officials about computers. Also, he had contact with the supplier's sales representative, their sales manager, and a systems engineering manager. The Plant Manager felt that the fact that the supplier was one of the leaders in the field of computers was a crucial point in their favor. He said that the fact that they were experienced, and for that reason could be of assistance, was a prime consideration.

The Chief Engineer also had contact with the supplier. He had a personal interview with one of the sales representatives from the supplier, during which they discussed all aspects of the computer (e.g. costs, applications, service, educational programs, etc.) He discussed these matters with the Plant Manager and with the present Plant Accountant, along with several others in the corporate offices. (Elsewhere he specifies contacts with the Controller and with the Vice-President for Engineering at the corporate level.)

The present Plant Accountant also had contact with the supplier sales representative, who assisted him by providing information on both the system design and the cost. The Plant Accountant was more involved in the selection of the supplier than of the specific computer model. He explained that it is a function of his position to help make this decision taking factors such as price, delivery and capabilities into consideration. He discussed this matter with the Controller and with the Manager of Computer Operations.

Differences of Opinion. The Manager of Computer Operations, who was involved in both the selection of the supplier and the type of computer explained that there was some difference of opinion as to which supplier provided the best soft-ware and had the best methods of doing the various applications. He said that many of the companies did not have random access devices (a method of obtaining information from the computer.) These differences, he said, were resolved through meetings and reviews of the purchaser's applications. He added, that he thought the fact that this supplier offered the best random access devices was essential to their being chosen over others. He mentioned cost, service and the fact that they were judged to have the best soft-ware as being other reasons for their selection. The Manager of Computer Operations gained most of his information from the salesmen of the various manufacturers, with whom he had continuous contact.

The Data Processing Manager was also concerned with the particular type of computer to be selected, analyzing the various computer models. He consulted the former Plant Accountant and also gained technical information from the supplier sales representatives. The Special Projects Engineer in turn, was consulted about the choices by the former Plant Accountant. He too, met with the sales representative to discuss the equipment. He suggested that the purchaser's previous experience with the vendor and the fact that they had used a great deal of their equipment also entered into their selection.

Responsibility. The Chief Engineer and the former Plant Accountant had the greatest responsibility both for the decision on the supplier and on the specific computer model. The Chief Engineer was primarily concerned about the choice of the particular kind of computer. As he explained, his involvement with the model was due to the fact that "...it was to be used for technical work and I am more knowledgeable as to what I expect to accomplish."

After recommendation from the Divisional Engineer and the Data Processing Manager, the Chief Engineer and the former Plant Accountant made their final decision on both the supplier and the computer model. Formal reports were written up and presented to the Plant Manager for approval. These were then given to the Controller (Corporate) and to the Vice-President, Treasury (Corporate). These Corporate officials gave their approval, which was endorsed by the President and by the executive Vice-President. The computer was ordered from the supplier in December 1966.

After the decision to lease a computer from this particular supplier had been made, several persons from the purchaser company attended a one week seminar at one of the schools of the successful supplier to learn more about this model computer and about how much educational training would be required. Some of the specific persons who attended were the Chief Engineer, the Divisional Engineer, the former Plant Accountant, the Data Processing Manager, and the Special Projects Engineer.

VI. Satisfaction With the Purchase Decision

Five of the eight respondents said that they had been "completely satisfied" with the decision to purchase the computer at the time it was made. Several persons gave as reasons that the computer would fulfill the purchaser's needs and had all the capabilities required. One respondent said he was completely satisfied because "after studying all the technical points, I felt [successful supplier] had the best equipment to do the job we wanted to do." Another respondent indicated that after the plant's extensive study, he was convinced that the purchase of the computer would be a "cost saving arrangement."

Out of the eight respondents, three were only "fairly satisfied" with the purchase decision. One of these persons said that he is never completely satisfied, as there is always room for improvement. Another explained that he was only fairly satisfied because of known failures on the part of the supplier in the recent past. He went on to say that the supplier had been unsatisfactory in their delivery of hard-ware and in release of specifications and soft-ware packages on the promised dates. which had cost the plant significant delays in their preparation for the economical utilization of the equipment.

Asked whether, if this decision could be made over again, they would be in favor of making the same purchase, all eight respondents said yes. Five persons commented to the effect that the equipment had not been in full use yet and consequently had not had time to prove itself unsatisfactory. Three persons specifically expressed their confidence in the supplier. Most of the respondents seemed to feel that the computer was a good one and would operate as anticipated.

VII. Sources of Information About Product and Suppliers

Asked about ways in which they got information about computers and about supplier of computers, people at the company gave the following information:

The Special Projects Engineer said he received much of his information from various manufacturing representatives and some general information concerning data processing from American Production and Inventory Control Society meetings. He also gained information of the use of computers from a large number of technical magazines, specifically, "A.P.E.X." and Steel magazine.

The Data Processing Manager was primarily informed through the sales representatives of the different manufacturers, who furnished the purchaser with manuals on their particular computer. The Data Processing Manager was also informed through the purchaser's contact with several present users of the supplier's equipment, to see what they thought of it. He explained that the plant wanted to see "how these computer manufacturers followed through on their promises." He felt that his most valuable source of information came from responses to letters which the purchaser company sent to each computer manufacturer requesting information about their particular computers.

The former Plant Accountant felt that his most valuable source of information came from the various manufacturers. He believed that "they are the ones who knew best what their computers could do as far as our requirements," He said that they gave each manufacturer an example of the purchaser's engineering application and that the suppliers' engineers provided information as to how these applications could be done on their computers.

The Chief Engineer said that he obtained most of his information from the vendor salesmen and their technicians, and also mentioned "vendor education programs" as a source of information. He received information from the study conducted by the purchaser's own personnel; read a great number of technical articles and "interviewed other companies that have used computers." He also mentions seeing a number of supplier advertisements.

From the interviews with persons at other companies using computers, the Chief Engineer got technical, operational and financial information. He commented that he read almost all the technical magazines concerning computers along with supplier newsletters. In these publications, he daid, he saw things about "new concepts which might apply to us."

The Vice-President of Engineering (corporate) said he did not get any information about the product, since, as he explained, "It was handled by the plant."

The Plant Manager said he gained his most valuable information from the representatives sent by the successful supplier. He attended one of their schools for a week with several other persons from the purchaser company. (Chief Engineer, former Plant Accountant, Divisional Engineer, Data processing Manager, Special Projects Engineer). He visited other plants to see what they were using and also plants using this specific equipment. Finally, he said that he read a number of magazine articles (magazines unspecified) which described different computer systems and what they can accomplish.

The present Plant Accountant felt that his most valuable source of information was the manufacturer's publications. He believed that the manufacturers were in the best position to know what their machines could do. Having the various manufacturers present their equipment and then contrasting those contacted, he felt, was the most reliable means of gaining information about the product. He also gathered some ideas from the publication Management Services.

The Manager of Computer Operations (corporate) attended conferences for data processing and other computer conferences at which the members exchange ideas on the uses of computers and their capabilities. He consulted a data processing systems book and also gained valuable informations from the various manufacturers.

Summary: Number of Persons (of Eight Interviewed) Who Mentioned Getting Information From Following Sources:

Others in company	7
Suppliers (representatives and literature)	7
Supplier educational programs (schools, etc.)	2*
Used standard reference work	1
Saw article and/or ad in magazine	4
Got information from persons(non-supplier) outside company	5

*Two other persons interviewed apparently attended supplier educational programs but did not mention this.

VIII. Summary of Persons Mentioned As Involved In Leasing Decision

A. Inside Company

Top Management:	Vice-President, Treasury (corp); Vice-President, Engineering (corp); Executive Vice-President (corp); President (corp)	4
Technical Specialists:	Manager of Computer Operations; Data Processing Manager	2
Financial:	former Plant Accountant; present Plant Accountant; Controller (corp)	3
Engineering:	Chief Engineer; Divisional Engineer; Manager, Engineering Dept. (corp)	3
Production:	Shop Superintendent; Special Projects Engineer; Manager, Production Dept. (corp)	3
Purchasing:	Manager, Purchasing Dept.	1
Other:	Plant Manager; Superintendent of Industrial Engineering; Manager, Personnel Dept. (corp); Manager, Sales Dept. (corp)	4
	Total	20

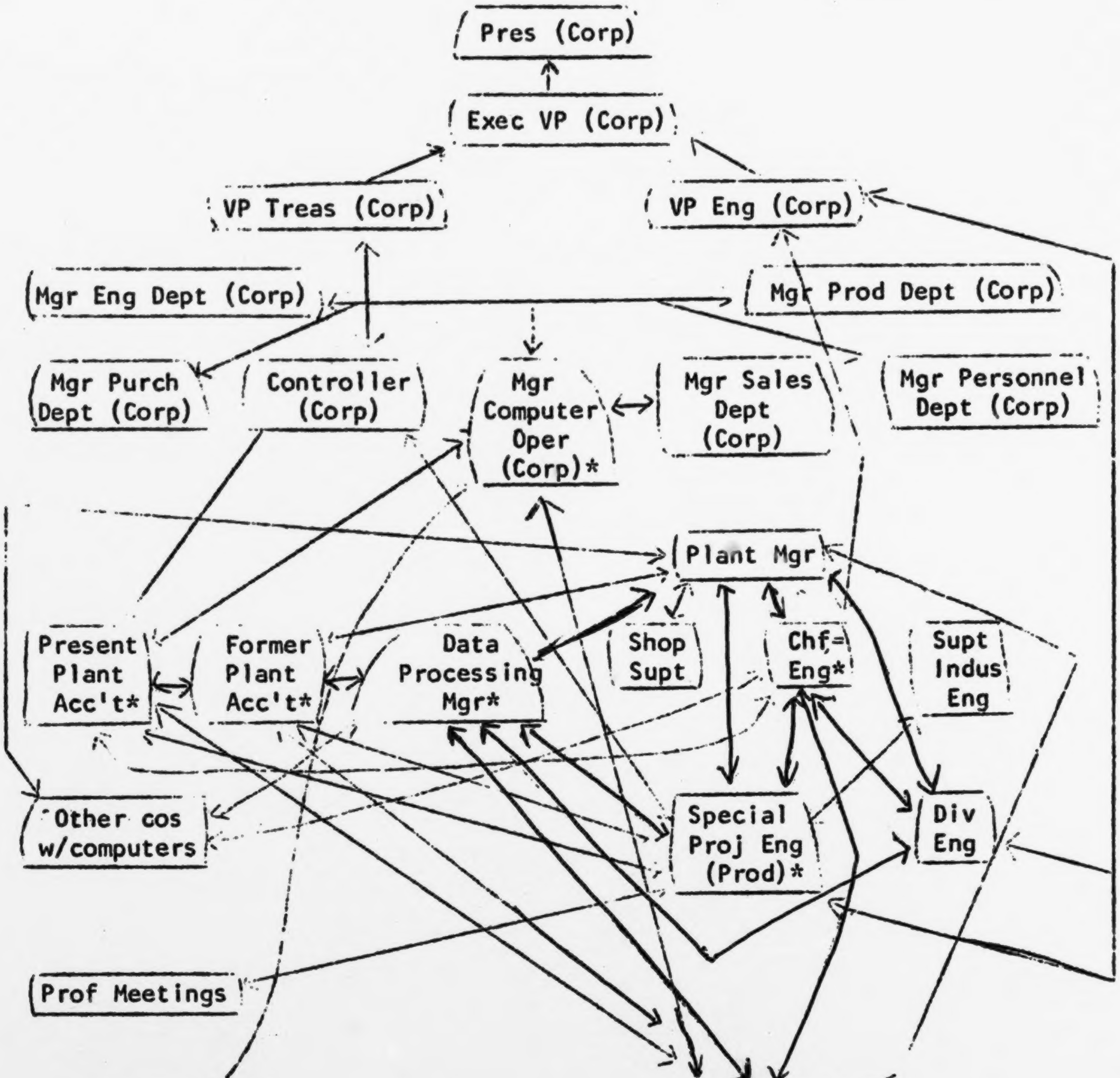
B. Outside Company (Other Than Supplier)

1) Persons in other companies using computers, contacted by Chief Engineer, by Data Processing Manager and by Plant Manager (number undetermined

2) Persons at meeting of American Production and Inventory Control Society, spoken to by Special Projects Engineer (number undetermined)

3) Persons at conferences on computers, spoken to by Manager of Computer Operations (number undetermined)

IX. Pattern Of Communications* Concerning Purchase**



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*Persons starred were interviewed.

**Since no organizational chart was available, organizational relationships are approximated.

X. Supplier's Perception of Purchase Decision

The supplier representative who was most involved in this rental said that he had most contact with the former Plant Accountant who, he said, was in charge of the computer system at that time. He also had contact, he said, with the corporate Manager of Computer Operations, with the present Plant Accountant, with the Divisional Engineer in charge of computer operations, with the Data Processing Manager, with the Chief Engineer, and with the Plant Manager. Asked who he thought took part in the decision to lease a new computer, he indicated all of those people with whom he had contact. (These persons named did include most of the key individuals.) The supplier representative believed that persons from the purchaser company knew about his company because they had been users of its equipment for a long time.

The supplier representative believed that the decision to lease the computer from his company rather than from another supplier was a "committee decision" involving the former Plant Accountant, the present Plant Accountant, the Divisional Engineer and the Data Processing Manager. All the persons the supplier mentioned were definitely involved in the decision to purchase from the particular supplier, with the exception of the Divisional Engineer. (He may have been involved in this decision, although it is not mentioned at any place in the company interviews.) In addition to these persons named by the supplier representative, the Chief Engineer, the Manager of Computer Operations, the Special Projects Engineer and the Plant Manager were also involved in the choice of supplier.

The supplier representative believed that the purchaser decided to buy from his company because they were able to convince the purchaser of the capabilities of their company to supply the programming systems that best-suited the purchaser's purposes.

Purchase Decision Study
Survey Research Center*
University of Michigan

19. CASE STUDY: DECISION TO PURCHASE A DATA RECORDING AND COMMUNICATIONS SYSTEM

I. The Purchaser

The purchaser is a steel company, which produces steel in a variety of forms (sheet, strip, and bar) as well as a number of steel products. It has plants in a number of cities throughout the country. The purchase being studied here was made for a steel-making works located in the same midwestern metropolitan area where corporate headquarters are found.

The corporation has a number of divisions, some of which cover several plants, and each with its own purchasing office. The division purchasing offices have a loose coordination through a committee which meets several times a year to exchange information about purchases and suppliers.

II. The Product Obtained

The product purchased is a data recording and communications system. Twelve items, including a computer, make up the entire system. The main purpose of the system is to transmit pertinent information about production to operators in 26 locations (e.g. rolling mill, metallurgical station) within the steel works and to one location in data processing.

The system is also used for recording the processing operations. Assistant Chief Engineer 1, Engineering, said that eventually the system will be used "to finish steel automatically by pressing buttons."

The system was purchased for a new mill. The data system was not included in the original plans for the mill but was recognized as a requirement during construction and was installed prior to the start of mill operations. Without this type of system, information concerning material already produced and material still in process would have to be carried by hand by messengers and by loud-speaker systems, and be recorded in hand-written records.

III. How Need Came Up

The idea for the system was suggested by the Superintendent Plant No. 2, Mills, who, as he said, is "responsible for the quality of the product." He said that he had seen the data communication and recording system used in other mills. "I could see how it saved labor but, even more important, it was more accurate," he said. He stated that it was he who "really inaugurated the idea for this mill" in about 1962 or 1963.

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*Interviewing was conducted by the National Opinion Research Center, University of Chicago. Interviews were conducted in May 1967 with the eight persons starred on the communications diagram, below, and with a representative of the supplier company.

IV. Deciding To Get The System

The Superintendent of Plant No. 2, Mills, brought the idea for an improved data recording and communication system to the attention of a number of others in the company. One such key person was the Manager for System Operations, who is in charge of systems and programming and responsible for designing and installing information systems that have been approved by top management. He said that the need was brought to his attention by the Superintendent of Plant No. 2, Mills, in the Spring of 1964. The Manager of System Operations said that he also discussed the matter with the Assistant Superintendent of Plant No. 2, Mills, and with Engineer 1 from the Engineering Department. "As a department, we recommended this type of system after investigation of other methods," the Manager of System Operations said. Also involved in this aspect of the decision-making was the Director of Systems Operations and a Systems Project Coordinator. The latter also discussed the matter with the Assistant Superintendent of Plant No. 2, Mills.

The initiator of the idea, the Superintendent of Plant No. 2, Mills, also discussed the possibility of installing the new system with people in the Engineering Department--specifically, with Assistant Chief Engineer 2 and Engineer 3--and with the Superintendent of the Electrical Department. One of the major tasks of those in Engineering was to estimate the cost of installing such a system in the new plant. Others who became involved in this matter within the Engineering Department were Engineer 1 and Senior Engineer 1. Engineer 1 discussed the matter with the Assistant Superintendent of Plant No. 2, Mills.

Industrial Engineering. Another department directly involved in the decision about whether to obtain the communications system was Industrial Engineering. The Superintendent of Industrial Engineering said that the matter was first brought to his attention by the prime initiator of the project, the Superintendent of Plant No. 2, Mills, in the Spring of 1964. He said he discussed the matter with Engineer 2 of the Engineering Department and "probably a dozen other people who I can't remember." His department, the Superintendent of Industrial Engineering said, "reviewed this system in order to lower our (the plant's) work force." In this work, Industrial Engineer 1 was involved and discussed the subject with the Assistant Superintendent of Plant No. 2 Mills. The Assistant Superintendent of the Metallurgical Department also was consulted.

In the course of the series of discussions concerning the possibility of getting the new communications system, there were some differences of opinion, according to the idea's originator, the Superintendent of Plant No. 2, Mills. Questions raised concerned the justification of the need for the system. The differences were resolved, he said, "by discussion and by final realization that such a system was needed and it was within the scope of money allotted for this mill."

Influence on Decision. Three of those having key roles in the decision to make the purchase--the Manager of System Operations, the Superintendent of Industrial Engineering, and the Superintendent of Plant No. 2, Mills--all named the latter as most influential in this decision. "He knew his needs, as Superintendent of the Mill," the Manager of System Operations said. "He summarized all the advice from the various staffs and it was for his department," the Superintendent of Industrial Engineering commented. However, the Assistant Superintendent of the Mill named a man higher up in the mill hierarchy--the Manager of Shape Mills and Roll Shops--as most influential in the purchase decision "because he was in a position where his opinion carried a lot of weight and he was convinced of the need for the system."

Reasons for Purchase. The major reasons behind the decision to get the system centered on its advantages for efficient operation. The Superintendent of Plant No. 2, Mills, gave as the main reason for the decision "that it would do a more effective job than would be done manually or could be done manually." The Manager of Systems Operations named "the need for providing information to operating people in the fastest way;" the Superintendent of Industrial Engineering spoke of "a more effective operation" as the prime reason behind the decision; and the Assistant Superintendent of Plant No. 2, Mills, specified "the better control of rolling progress" as the most important reason for getting the new system. The latter also mentioned the greater accuracy under the new system and both he and the Superintendent of Industrial Engineering mentioned a reduction in necessary manpower as another reason for getting the system.

Formal approval for the decision to purchase such a system was obtained from the Assistant Chief Engineer 2, Engineering, from two Assistant General Managers of the Mills, from the General Manager of the Works where the Mills are located, and from the President of the Company.

V. Selecting a Type of System and Supplier

While many suppliers manufacture this type of communications and recording equipment, it is usually custom-made to the specifications of the customer. At this purchaser company, the Engineering Department prepared the specifications for the system. Those in the Engineering Department involved in this project included an Assistant Chief Engineer, and at least two Electrical Engineers (Engineers 1 and 2) and a Senior Engineer 2 in the Engineering Department. The System Operations Department also helped to shape the general requirements of the system. The Manager of System Operations said he discussed the choice of the specific type of system with Engineer 1, with the Assistant Purchasing Agent, and with the Assistant Superintendent of Plant No. 2, Mills.

Suppliers Considered. After the specifications were completed by Engineering, they were sent to the Purchasing Department in about July 1964. Assistant Purchasing Agent 1, Purchasing Department, sent out the specifications to various suppliers. Eight suppliers were mentioned by those interviewed as having been considered at some time. Three suppliers were mentioned most often, evidently indicating that they had been considered more seriously (not all bidders were considered to have met the specifications adequately). In addition to Assistant Purchasing Agent 1, whose discussion with the Sales Department of the successful supplier concerned clarification of the specifications and of the price, two other persons among those interviewed had early contact with the successful supplier. The Manager of System Operations talked with the supplier Area Sales Manager, concerning the design of the system, and the Superintendent of Plant No. 2, Mills, had "information giving and receiving" discussion with representatives of the supplier.

Evaluation of Systems. Once bids had been received from various suppliers, a number of departments--Engineering, Systems Operations, Industrial Engineering, Purchasing, and the Mill Operations people all took part in evaulation of the various systems. In the Engineering Department, a Senior Engineer and an Electrical Engineer reviewed all proposals and made recommendations. The Manager of System Operations said that he "compared all available suppliers and their systems." He discussed the choice among systems with the Systems Project Coordinator in his own department, with Engineer 2 in the Engineering Department, and with the Superintendent of Plant No. 2, Mills.

The Superintendent of Plant No. 2, Mills, said while he didn't have direct responsibility for choosing the system, he "wanted to be sure the system was what I wanted and felt was needed for our operation." He discussed the matter with the Chief Engineer. The Assistant Superintendent, Plant No. 2, Mills, also discussed the type of system to be obtained with the Systems Project Coordinator, System Operations, and with Engineer 1 from the Engineering Department.

Assistant Purchasing Agent 1 said that he too "shared in the evaluation of the analysis of all the proposals." He said he discussed the choice of the type of system with Engineer 2 of Engineering, with the Manager of Industrial Engineering Services, with the Superintendent of Industrial Engineering, with the Superintendent and Assistant Superintendent of Plant No. 2, Mills, with the Manager of Shape Mills and Roll Shops, with Supervisor 1, Electrical Department, and with the Systems Project Coordinator and Manager in System Operations.

Differences of Opinion. There were, initially, some differences of opinion about which supplier's system to choose. "Each one had its own features and prices," the Superintendent of Industrial Engineering said. Additional information was obtained by sending Industrial Engineer 1 to visit the successful supplier and by sending Senior Engineer 1 and Engineer 1 to other steel companies to inspect and observe similar equipment already in operation. Finally, Assistant Chief Engineer 1 said, the company obtained "added suggestions to our original specs from the supplier." On the basis of all information, the differences of opinion wer resolved by conference of those involved, in which the decision went against the original recommendation of the Engineering Department.

Reasons for Supplier Choice. Several basic reasons were given by respondents for the choice of the particular supplier. First, the supplier chosen made the lowest bid, a factor which was seen as the most important reason for its success by the Manager of System Operations, by the Superintendent of Plant No. 2, Mills, and by Assistant Purchasing Agent 1. Secondly, the equipment met the specifications. The Manager of Industrial Engineering, who felt that "the equipment itself" was the number one factor in this choice, said, "They could best provide the equipment to fit our needs." The Assistant Superintendent of Plant No. 2, Mills, also explained the choice of the particular system in terms of it being "the most effective for us." Finally, Assistant Purchasing Agent 1 also mentioned that the successful supplier was able to make delivery when needed.

Influence on Decision. With respect to the question of who had greatest influence on the choice of a particular system, no consensus was present among those interviewed. Three respondents mentioned one of three different persons in System Operations, on the basis of this department's responsibility for designing data communication systems and their knowledge of the subject. Assistant Chief Engineer 1, Engineering, named his superior, the Chief Engineer, as most influential in this choice "because he is the responsible authority for engineering and the equipment to do the job." The Superintendent of Plant No. 2, Mills, felt that he was most influential in this choice "because it was to be used in my plant." Assistant Purchasing Agent 1 said that he didn't think that "anyone in particular" was most influential in the choice of which particular communications system to get. "I think it was a joint decision," he said.

After the choice of a system had been tentatively made, the choice required the approval of the Electrical Department, which has responsibility for maintenance of electrical equipment. The Assistant Superintendent of the Electrical Department discussed the matter with Engineer 2 in Engineering. Also involved in the Electrical Department were two Electrical Supervisors. The people in the Electrical Department would have preferred that an electrical supplier--one that deals only with electrical systems and supplies--had been chosen rather than the supplier which was selected. However, they gave their approval to the supplier which had already been chosen.

On November 20, 1964, a requisition from Engineer 1, Engineering Department, specifying the supplier and approved by the Superintendent of Plant No. 2, Mills, by the Superintendent, Electrical Department, by the Manager, System Operations, and by Assistant Chief Engineer 2, Engineering Department, was sent to Purchasing.

Buy or Lease. After this requisition was received, the Purchasing Research section, Purchasing Department, did an analysis of whether the equipment should be bought or leased. The Assistant to the Purchasing Agent, Purchasing Research, commented that there are "many complicating factors such as investment tax credit, terminal salvage values and estimate of economic life and other factors that must be considered." The decision was to buy. A contract was negotiated by Assistant Purchasing Agent 1 with the approval of the Purchasing Agent.

A purchase order was issued by Assistant Purchasing Agent 1 on December 22, 1964. Delivery was specified for six months from that time--i.e. mid 1965.

VI. Sources of Information

Asked about ways in which they got information about this type of communication and recording system or about suppliers, those persons interviewed gave the following information:

The Superintendent of Plant No. 2, Mills, said that he had gotten information about the system from seeing it in other mills. He said he had received further information from the Chief Engineer, Engineering, concerning "what was possible to achieve." He felt that this information from the Engineering Department was the most valuable source of information for him. He said he "had virtually no information about suppliers; that's up to Purchasing."

The Assistant Superintendent, Plant No. 2, Mills, said that he had gotten relevant information from an Engineer in the Engineering Department, from the Systems Project Coordinator, System Operations, and from the Assistant Purchasing Agent. He also visited the plant of another steel company in an eastern state and "watched a system in operation there." Of his various sources of information, he felt the Systems Project Coordinator, was most valuable because "he coordinated the whole deal and told me more than anyone else."

The Manager of Systems Operations said he had obtained relevant information "through our normal contacts of long standing with suppliers and through the Purchasing Department. We explained the scope of the project and they (the suppliers) came back with detailed information on how they could or would handle the system." He felt that the suppliers were his most valuable source of information "because they had the experience and had installed similar systems."

Assistant Chief Engineer 1, Engineering, said that after the specifications proposed by Engineering had been sent to suppliers through Purchasing and replies received, Purchasing then "sends us all of the information they have on these systems." Also, he said, "we sent men to different steel companies to inspect and observe equipment already in operation." He felt that his most valuable information came "from my own people. Their opinions are not biased."

The Superintendent, Industrial Engineering, said that he "sent a representative to the (successful) manufacturer and analyzed the specifications of the other bidders, (evaluating) the efficiency of the system and the number of people necessary to operate it." He also got information from the Systems Project Coordinator, System Operations, with whom he discussed "the original specifications for speed and reliability of the system." He felt that the System Operations Department was his most valuable source of information because "they were most familiar with the system."

Assistant Purchasing Agent 1 said that he got information "from the specs and also a list of recommended suppliers from the Engineering Department--(Engineer 2)." He felt that his most valuable source of information was "my own personal experience. I take pride in knowledge in this area."

The Assistant Superintendent, Electrical Department, said that "almost all of this sort of information is relayed to us through the Engineering Department...about the design of the electrical systems, things we'd have to know in order to maintain it." He said also that he had received information from the successful supplier about its electrical system, "but that was after the purchase." He felt that his most valuable source of information was the successful supplier. "They build the equipment and can tell us best how to maintain it," he said.

All of those interviewed said that they had not seen any relevant articles or advertisements in any publication.

Summary: Number of Persons (of 7 interviewed concerning sources of information) who got Information from Following Sources:

Others in Company	7
Suppliers	5
Other Steel Companies	3

VII. Satisfaction with Purchase Decision

Of seven persons questioned about their satisfaction with the purchase decision at the time it was made, six said they had been completely satisfied. The Assistant Purchasing Agent said that "the total review of the entire project was, prior to aware, acceptable to everyone." This was confirmed by respondents representing all departments, except for one man who commented that this type of system was over-emphasized and that, in any event, he would have preferred a different supplier.

Asked if they would be in favor of making the same purchase, if the decision could be made over again, four of the seven said no, one said he was not sure, and two said yes but qualified this affirmative response in their comments. The problem, it was generally agreed, was that the system purchased was not large enough to meet the need. The Superintendent of Plant No. 2, Mills, summarized the general trend of the comments in saying, "I'm satisfied as far as it goes, but it does have to be augmented with further equipment, about $80,000 worth (compared to original cost of about $150,000) to bring in more cables. It's not quite big enough to cover our needs, but this is not the fault of the supplier or our people--we just didn't know enough about it."

VIII. Supplier's Perception of Purchase Decision

The supplier company, though still a relatively small firm, has undergone tremendous recent growth. At this company, the District Sales Manager, who said he "guided and assisted and coordinated the entire transaction," was interviewed (although a Sales Engineer had the most contact with people at the purchaser company). The District Sales Manager said he had most contact with the Systems Project Coordinator, System Operations (whom he incorrectly identified as being from the Engineering Department) and also had contact with Assistant Purchasing Agent 1.

Asked whom he thought took part in the decision to buy a communications system at this time, the District Sales Manager named the Assistant Superintendent of Plant No. 2, Mills; the Systems Project Coordinator, Systems Operations; and Assistant Purchasing Agent 1. (Other departments involved in this decision were the Engineering and Industrial Engineering Departments.)

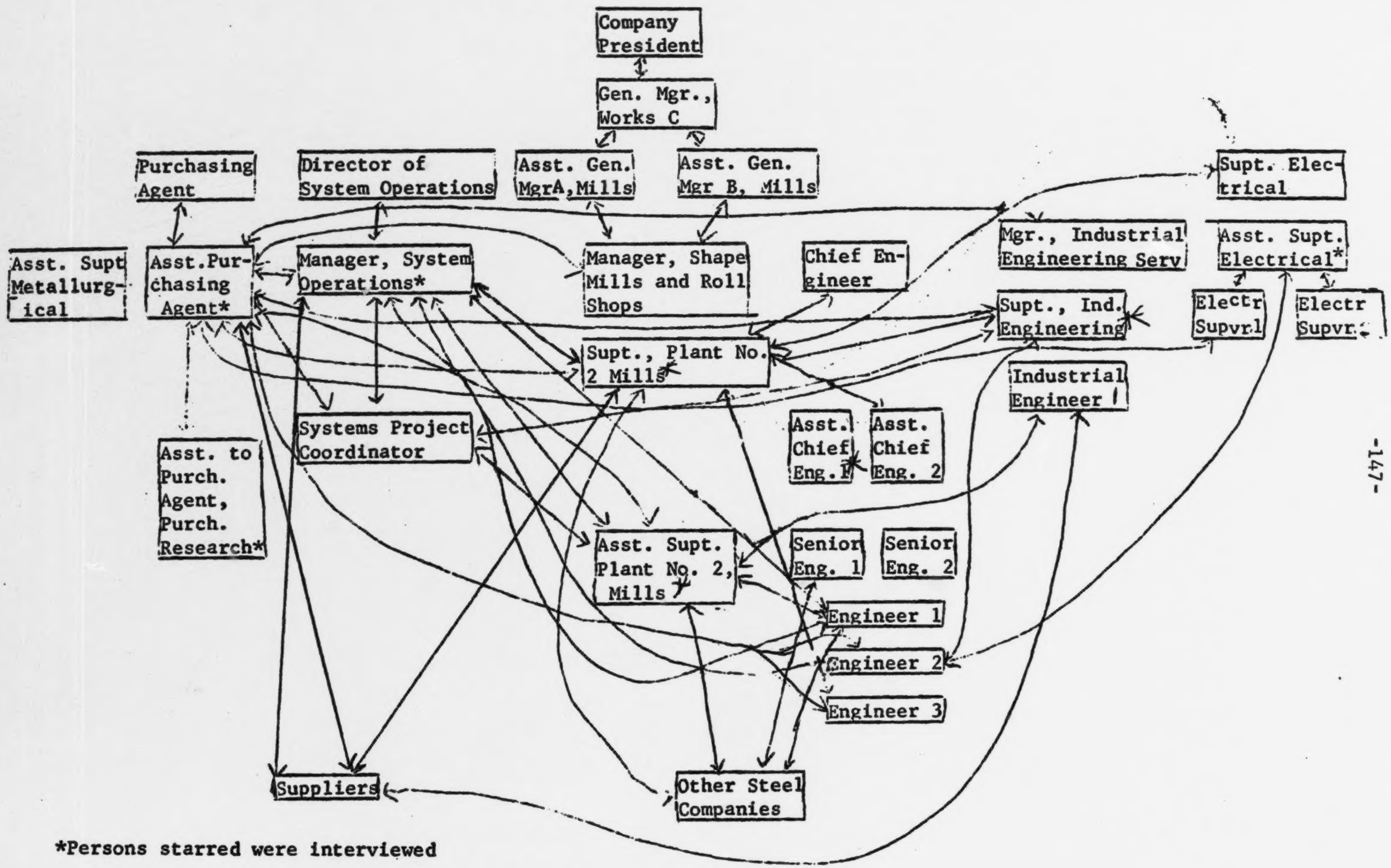
The District Sales Manager believed that the purchaser company knew about his own company "through our sales efforts and through the reputation of our system in other plants." Asked whom he thought decided to buy this system from his company, rather than from another supplier, he again named the Systems Project Coordinator, System Operations; Assistant Purchasing Agent 1; and the Assistant Superintendent of Plant No. 2, Mills. (As indicated above, many other persons from a variety of departments also had a role in this decision.) As for the reasons for the choice of his company, he said,"I think it was basically economics. Also, our being able to build a communications system that would fit their particular needs." (This perception coincided with the reasons offered by persons at the company.)

IX. Summary of Persons Mentioned as Involved in Purchase*

Top Management:	President	1
Production:	General, Manager, Works C; Two Assistant General Managers, Mills; Manager, Shape Mills and Roll Shops; Superintendent and Assistant Superintendent, Plant No. 2 Mills	6
Engineering:	Chief Engineer; Two Assistant Chief Engineers; Two Senior Engineers; Three Engineers	8
Industrial Engineering:	Manager; Superintendent; Industrial Engineer	3
Technical Specialists:	Director, System Operations; Manager, System Operations; Systems Project Coordinator, System Operations; Assistant Superintendent, Metallurgical	4
Purchasing:	Purchasing Agent; Assistant Purchasing Agent; Assistant to Purchasing Agent, Purchasing Research	3
Electrical (Maintenance Services):	Superintendent; Assistant Superintendent; Two Supervisors	4
Other:	Persons at other steel companies(number unknown)	-
	Total	29+

*The Superintendent of the Industrial Engineering Department said that he could not remember all of the persons with whom he discussed this purchase.

X. Pattern of Communications Concerning Purchase, As Indicated By Those Interviewed



*Persons starred were interviewed

Purchase Decision Study
Survey Research Center*
University of Michigan

20. CASE STUDY: DECISION TO PURCHASE PRINTING PRESSES

I. Purchaser

The purchaser is a large, midwestern based corporation with plants in several parts of the country. The company does contract printing for magazines, books, and other publications.

The Purchasing Department employs twenty-eight persons and is responsible for all corporate purchases and approval of all divisional purchases. Within the Purchasing Department are five groups, each responsible for different types of purchases. The group which handled this purchase (Group 2) consists of a Manager, Purchasing Engineer and four buyers and is responsible for equipment, maintenence and utilities.

II. Product Obtained

The products purchased were two high volume letter press printing presees, double ender type. Each press can print thirty-two pages in six colors.

The presses were purchased for a new plant which was to begin printing a magazine in fulfillment of a new contract. Previously, this work had been done by another company.

III. Decision to get a Product in This Category

The Sales Department procured the new contract to print a national magazine in May 1965. Since the size and the circulation of the magazine are large, it was necessary to build a new plant in which this magazine would be printed. The equipment necessary for printing the magazine was, of course, the key part of the new plant.

The Vice-President of Sales and the Sales Manager submitted a memo about the need for the presses to the Manager, Engineering Analysis and Control; to the Vice-President, Engineering & Research;to the Manager, Engineering Economics and Analysis; and to the Vice-President, Corporate Purchasing. Everyone concerned agreed about the desirability of purchasing the presses.

IV. Choosing the Type of Press

It is the job of the Manager, Engineering Analysis and Control "to supervise the preparation for all estimates of costs for purchases of any equipment and to write the specifications for all major pieces of equipment over $100,000." He made up the necessary preliminary forms and then asked the Manager, Engineering Economics and Analysis, to provide further information on specifications and prices.

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*Interviewing for this study was conducted by the National Opinion Research Center, University of Chicago. Persons starred on the communications diagram below were interviewed in April 1967. An interview with a representative of the supplier company could not be arranged for this case.

Once the specifications and estimates were completed, a committee was formed to approve them. A meeting to discuss the subject was presided over by the Vice-President, Engineering and Research. Also in attendance were the Manager, Engineering Analysis and Control; the Manager, Engineering Economics and Analysis, who had prepared the specifications; the Chief Engineer, Product Engineering; the Manager, Press Engineering; the Vice-President, Purchasing; the Manager, Section 2, Purchasing; and the Purchasing Engineer, Section 2, Purchasing. The Works Manager of the new plant had also submitted a set of requirements, as had the customer. The specifications were submitted to the group and discussed by them.

Within this group, opinions differed at first about the best type of press to buy. However, the Manager, Group 2, Purchasing, said "We defined what had to be done and that made the opinions or objections disappear." "Agreement was reached by a consensus of opinion," the Manager of Engineering Analysis and Control said.

Judgments about who had the greatest influence on the type of press to get differed among those interviewed. Three persons attributed greatest influence to the Manager of the Engineering Analysis and Control Department. "He had analyzed it and knew the most about all prices, specifications and everything about the whole deal," one man said. "It's his responsibility to propose the one he thinks best," another added.

Three other respondents emphasized the role of the Vice-President for Engineering and Research. One commented, "He presided at the meeting we had about this purchase." Another said, "He had the ultimate responsibility for making the decision."

Finally, one respondent attributed greatest influence on the selection of a press to the Manager of the new plant. "He has to run the plant at a profit. He decides what's best for him," this informant said.

Apparently, then, a number of people had a substantial influence on the decision, based on their respective expertise and responsibilities. Once the committee had made its decision about the type of presses to be purchased, the specifications were formally approved by the Vice President and Director of Division A (the division of which the new plant is a part), and by the Senior Vice President, General Manufacturing.

V. Choosing a Supplier

The next step was to survey the possible suppliers of printing presses that would meet the established specifications. After reviewing possible vendors, the Purchasing Engineer, Purchasing, sent out the specifications to four suppliers and obtained their bids. After all of the bids had been received, they were reviewed by the Purchasing Engineer, Purchasing; by the Manager, Group 2, Purchasing; by the Manager, Press Engineering; by the Chief Engineer, Product Engineering; and by the Vice-President of Engineering and Research. Before a decision was reached, the Manager, Press Engineering; the Manager, Group 2, Purchasing; the Chief Engineer, Product Engineering; the Vice-President, Purchasing; the Manager, Press Engineering; the Manager, Engineering Economics and Analysis; the Manager, Engineering Analysis and

Control; and the Purchasing Engineer; Group 2, Purchasing, all had personal contact with the supplier. These contacts were to discuss price, delivery date and the feasibility of making alterations on the presses to meet the company's specifications. The persons contacted in the supplier company were the President, Vice-President, Vice-President of Manufacturing, Sales Manager, and Engineer.

There was some discussion among those concerned with the purchase about which supplier could meet the delivery date at a price the company was willing to pay. As the Chief Engineer, Product Engineering, stated, differences of opinion were resolved by "various analyses of the machines and surveys of opinion"among those in the company. The supplier was chosen on the basis of price and delivery date, the Vice-President, Engineering and Research, said. The most important reason, he said, was that the successful supplier "submitted the significantly lower price for the press we wanted."

After the supplier was chosen and was approved by the Senior Vice-President, General Manufacturing, and by the Vice-President and Director of Division A, the Manager of Engineering Analysis and Control submitted on September 7, 1966 a requisition for the two presses to the Purchasing Department. The requisition was signed by the Vice President, Purchasing, and approved by the Accountant, Appropriation and Property Control.

The purchase order was signed on the same day by the Purchasing Engineer, Group 2, Purchasing, and approved by the Vice President, Purchasing. The transaction then received formal approval by the President of the Company and by the Board of Directors (which includes the Senior Vice President for Manufacturing, the President, and eleven other persons). The first press is to be delivered on May 30, 1968, the second on July 15, 1968. The Purchasing Engineer, Group 2, Purchasing, said he is "in telephone contact with (the supplier) at least once each week. We discuss the design of the press and its progress."

VI. Sources of Information about Product and Supplier

Asked about ways in which they got information about the product and supplier, people interviewed at the company gave the following information:

1. The Manager, Engineering Economics and Analysis, said he received his information from past experience and from data sent by the possible suppliers in response to the specifications sent out by the Purchasing Engineer, Purchasing. He felt the most valuable of these sources to be "the information from the manufacturers from the data we submitted to them."

2. The Vice President, Purchasing, stated that his sources of information were the data sent by the suppliers and the specifications submitted by "our Engineering Department." He felt that the most valuable source for him was "the information from our own staff, because we have 'know how' probably better than anyone else, even the manufacturers, because of the extent of work we do."

3. There were three sources of information cited by the Manager, Engineering Analysis and Control. He said that the data 'on the product itself came from the Sales Department, as described by the customer." He also received some information from the Manager, Engineering Economics and Analysis. From past experience he had"a wide knowledge of the manufacturers and knew what each makes." He felt this last source was most valuable to him.

4. The Manager, Group 2, Purchasing, got some general information from the Vice President, Purchasing, and technical data from the Manager, Press Engineering. He had also had past experience with suppliers and different types of equipment. However, he felt the most valuable source of information in this case was his "personal contact with the supplier."

5. Information on the specifications and costs was received by the Chief Engineer, Product Engineering, from the Manager, Engineering Analysis and Control. He also mentioned having had past experience with suppliers. His most valuable source of information, he said, was "experience with similar equipment that we had been using."

6. The Manager, Press Engineering, received all of his information from the specifications and estimates provided by the Manager, Engineering Analysis and Control, and from personal contact with the supplier salesman.

7. Information on the specifications was also obtained from the Manager, Engineering Analysis and Control, by the Purchasing Engineer, Group 2, Purchasing. He had had past experience buying presses. However, he felt that his most valuable source of information was personal contact with the salesmen because "This is a specialized press, and these men are really engineers and really know their business."

8. The Vice President, Engineering and Research obtained his information from the specifications, from the supplier's bids and from past experience. The latter was most valuable for him, he felt, because "over the years we have done business at one time or another with every major manufacturer of presses."

Of the eight persons interviewed, none said he had obtained information from anyone outside the company, other than from suppliers, and all said that they had seen no relevant articles or ads in any publication.

SUMMARY: Number of Persons (of 8 Interviewed) Who Mentioned Getting Information from Following Sources:

Others in company	7
Contacts with salesmen	3
Information (bids) from Supplier	4
Previous experience with product	6

VII. Satisfaction with Purchase Decision

Seven of the eight people interviewed said they had been "completely satisfied" with the decision at the time it was made. One said, "I just thought that this press would be right for us and I know the (supplier) company to be reliable." Others expressed the opinion that the company had bought the proper equipment at the best price. The Vice-President, Engineering and Research, stated that he "had been given the opportunity to tell the President of our company what I felt was desirable in the press, and this one will have everything I requested." However, one respondent said that he was only "fairly satisfied" with the decision because he "didn't feel that the contract specifications were finely worked out."

Asked whether, if the decision could be made over, they would be in favor of making the same purchase, all said yes. Six of the eight gave the same reasons they had given for their complete satisfaction at the time the decision was made. The Chief Engineer, Product Engineering, said he would make the same decision because "the (supplier) company seems to be fulfilling the contract and specifications." The man who had some reservations at the time the decision was made said he would make the same decision again, commenting "the original arrangements were adequate, but I still would like to see specifications that are more detailed."

VIII. Summary of Persons Mentioned as Involved in Purchase*

Top Management:	President; Senior Vice-President, Manufacturing; Vice-President, Engineering and Research; Vice-President, Division A; Vice-President, Sales; Vice-President, Purchasing; Board of Directors (Eleven Persons in addition to President and Vice-President)	17
Engineering:	Chief Engineer, Product Engineering; Manager, Engineering Analysis and Control; Manager, Press Engineering; Manager, Engineering Economics and Analysis	4
Purchasing:	Manager, Section 2; Purchasing Engineer, Section 2.	2
Production:	Works Manager	1
Sales:	Sales Manager	1
Accounting:	Accountant, Appropriation and Property Control	1
	Total	26

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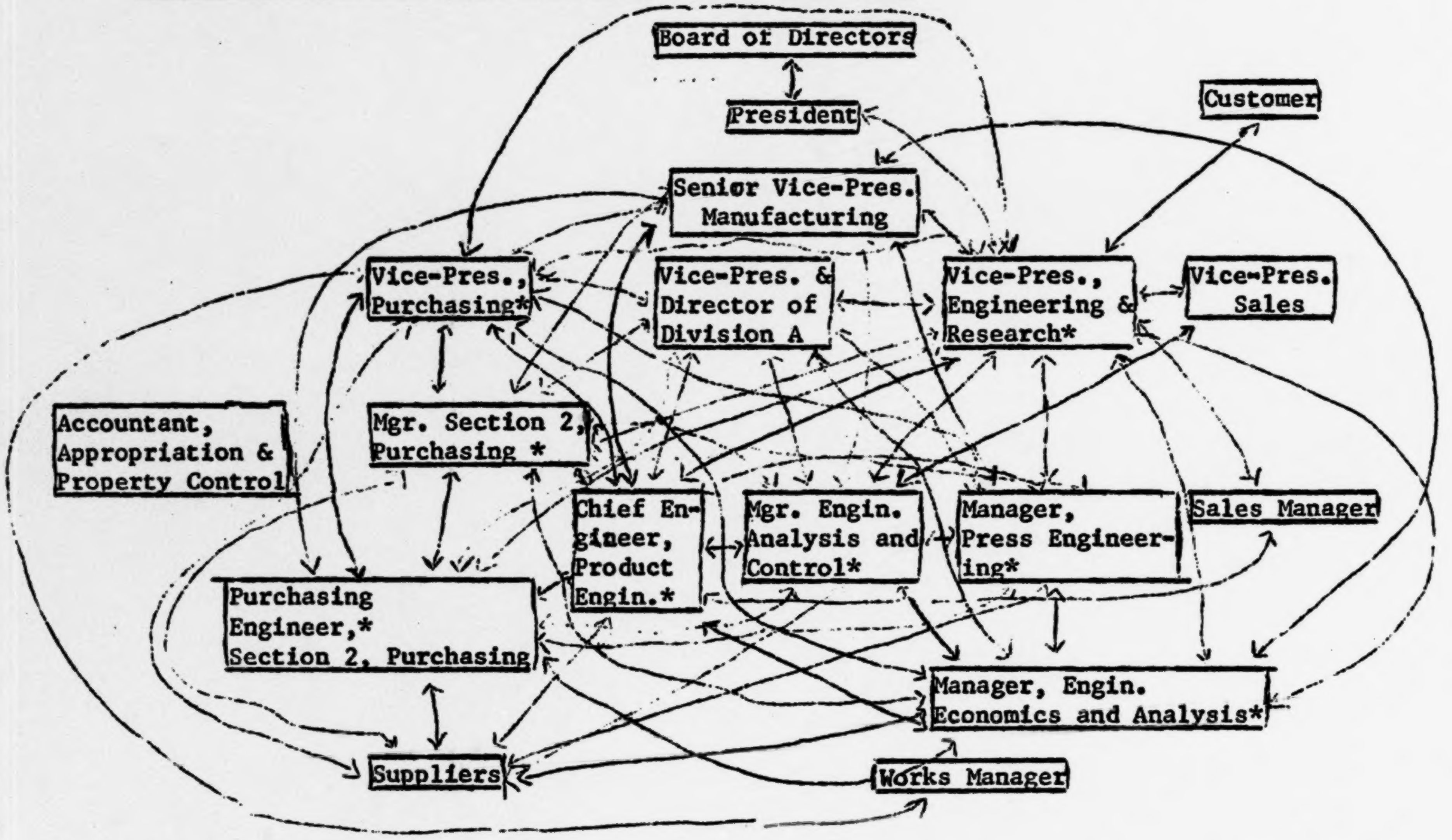
*Also involved to some extent was the customer company which submitted a set of requirements for the presses.

IX. Overall Pattern of Communications Concerning Purchase*


Board of Directors
President
Customer
Senior Vice-Pres. Manufacturing
Vice-Pres., Purchasing*
Vice-Pres. & Director of Division A
Vice-Pres., Engineering & Research*
Vice-Pres. Sales
Accountant, Appropriation & Property Control
Mgr. Section 2, Purchasing *
Chief Engineer, Product Engin.*
Mgr. Engin. Analysis and Control*
Manager, Press Engineering*
Sales Manager
Purchasing Engineer,* Section 2, Purchasing
Manager, Engin. Economics and Analysis*
Suppliers
Works Manager

*Persons starred were interviewed.

Purchase Decision Study
Survey Research Center*
University of Michigan

21. CASE STUDY: DECISION TO BUY SYSTEM FOR CLEANING MILK PROCESSING EQUIPMENT

I. Purchaser

The purchaser is a mid-western based corporation with several divisions, most of them in the middle west. It prepares and packages foods. The bulk of its sales are in dairy products, both fluid and non-fluid. Purchasing is done both at a corporate and divisional level. Some divisions of the corporation have no separate office for purchasing and in such cases the Divisional Managers are responsible for purchasing. Centralized purchasing is done for services; for durable goods such as vehicles; for packaging materials common to all divisions; and for durable goods which, though not common for all divisions, are expensive. The corporation purchasing function is handled by one man, the Director of Purchasing, but persons employed in other capacities assist him for particular purchases about which they are knowledgeable.

II. The Purchase Decision

The decision studied is to purchase for one company plant a "clean-in-place" system for the washing of all equipment used in the processing (receiving, pasteurizing, bottling) of milk. With this system, the equipment design and assembly is now set up so that it can be cleaned in place, without disassembly, by circulating various cleasing solutions. First, a rinse water solution is circulated; then a relatively strong washing power solution; and finally a rinse which contains a sterilizing agent, chlorine. All of these solutions are tempered (heated) to 120-125^{o}F., which normally is too hot for a person to handle. This new system also automatically controls the flow of products (i.e. milk) throughout the processing operation. Such a system was already installed at several other plants of this company.

Before this system was installed, in this plant, the several pieces of equipment involved had to be taken down or apart for cleasing. Men climbed inside the taks and vats to wash them by hand.

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*Interviewing for this study was conducted by the National Opinion Research Center, University of Chicago. Interviews were conducted with the Executive Vice-President and with the Assistant Vice-President on January, 1967 and with a supplier representative in April, 1967. The Plant Manager at the purchaser company was not available for interviewing.

III. How Need For Getting Product Came Up

The previously used method of cleaning the equipment had a number of disadvantages. Because previously everything had to be taken apart and washed separately, a weaker solution and cooler water had to be used. After repeated washing, the water would be greasy. Also, the equipment was being mishandled, i.e.,got bent and nicked. As the Assistant Vice-President of Operations said, "we were not getting a good job done."

The Executive Vice-President for Operations said he was "aware of the clean-in-place system when it was first approved in 1954 by the Chicago Board of Health;" he was also aware of the deficiencies of the previous cleaning system when in January, 1965, the company decided to expand this plant. The corporate Executive Vice-President for Operations (also responsible for capital expenditures) suggested that the Clean-in-place system be installed at the same time. He brought this matter to the attention of the Assistant Vice-President of Operations who, among other duties, is responsible for all engineering and new construction. The Executive Vice-President and the Assistant Vice-President were the two men originally involved in the discussion of need, although the Plant Manager was consulted about what he thought the savings in labor with the CIP system would be.

IV. Deciding To Install The System

Discussions about the desirability of installing the system took place primarily between the Executive Vice-President for Operations and the Assistant Vice-President for Operations. They also discussed with the Plant Manager what he thought the savings in labor would be. "It was discussed with no one else" (at this stage,) the Executive Vice-President said.

It was the Executive Vice-President who was the key man in deciding to seriously explore this matter. "He's the one who formulated the plans two or three years ago," the Assistant Vice-President said.

Several reasons lay behind the decision to go ahead with the new cleaning system. One, the Executive Vice-President explained, was "reports from various Boards of Health that we would have cleaner pipes and equipment." Secondly, a report for the Plant Manager stated a savings in labor which would, the Executive Vice-President said, warrant the investment. "I felt that this system had to be put in at this time because it was a sanitary system. Also, other people were doing this. It was working out well for them and was more economical," the Executive Vice-President said.

The decision to install this system had to be approved by the Board of Directors, consisting of the Chairman, the President, the Vice-President-Treasurer, the Secretary, and two other members as well as the Executive Vice-President himself. The Board's approval was indicated to be a formality.

V. Selecting A Specific Type Of System And A Supplier

After the decision was made to look into CIP systems, the Assistant Vice-President and the Plant Manager "set up an outline" of the type of system they wanted. Clean-in-place systems are custom-made to fit the particular situation. To set up the details of the system, and to prepare drawings and specifications, they hired "as an individual" and engineer from one of the companies (supplier A) that supply such systems. However, the Assistant Vice-President explained, this did not commit their company to buy from that particular supplier. "It was understood that it was going out for open bid. Everything being equal, we would have leaned toward (supplier A)," he said.

Bids were asked for and submitted by four suppliers. "We had given each one a set of specifications. Before we made the decision, we (the Executive Vice-President and Assistant Vice-President) called each one in quite a few times for discussion," the Executive Vice-President said. "[We wanted] to make sure that everybody understood exactly what we wanted," the Assistant Vice-President said.

The Executive Vice-President said that he discussed the choice of supplier with no one at the company besides the Assistant Vice-President, although he mentions finding information from the consulting engineer to be valuable. The Assistant Vice-President also mentioned the knowledge of the consulting engineer as valuable and said he also benefitted by the experience of the Plant Manager. In addition, both men visited other dairies and spoke to executives there. The Executive Vice-President said that to learn more about suppliers, he visited other dairies with CIP systems. Specifically, he said he spoke to the General Manager of a dairy company in another part of his own state and to the General Manager of another dairy in a northeastern state. The Assistant Vice-President visited three other dairies and spoke with the plant manager of each one. He also telephoned a dairy in another state and spoke to the Vice-President in charge of manufacturing there. "The dairy business is like a fraternity," he said, adding that he probably mentioned the subject of CIP systems to several others in the business.

The Assistant Vice-President had the greatest influence on the choice of a supplier. "I did all the groundwork investigation on this," he said. The Executive Vice-President, who approved the selection, said "I relied on his judgment."

The supplier chosen, supplier B, was not the one with which the engineer who drew up the specifications was associated. Though the company was prepared to lean toward Supplier A, this supplier was, the Assistant Vice-President said, "way out of line on price." Supplier B was chosen, he said, for two reasons: a) the price, which was "much lower than anybody else;" and b) "we made sure they would do a competent job; we had a guarantee from them that the system would work." The executive Vice-President commented that "their representative convinced us that they would come through to do a good job despite the low bid." The Assistant Vice-President indicated that price was the crucial reason for the choices. "All of the companies would have performed adequately, so the main reason had to be price," he said.

After Supplier B had been tentatively chosen, the Executive Vice-President and Assistant Vice-President had "at least three meetings" with the supplier to make sure they understood the job completely.

The purchase agreement was concluded on May 6, 1966.

VI. Sources Of Information

The Executive Vice-President said that he has known many suppliers for years. He said that there is a directory published once a year which lists the names of organizations that supply dairy companies. Moreover, he said, "when your're in this business for forty years, you have previous contacts with suppliers."

The Executive Vice-President also mentioned as sources of information the engineer who drew up specifications for the system; the Assistant Vice-President, who looked into various CIP systems; discussions with a number of suppliers; and his visits to other plants. He also saw relevant m aterials in several publications--*Dairy Review*, *Ice Cream Review*, and *Milk and Cheese Journal*, He said that these publications offered "all the latest ideas in processing(and) discussion of new products that have been developed."

Of the various sources of information, the Executive Vice-President named as most valuable the engineer hired to do the drawings. "He was experienced and knowledgeable about the system," he said.

The Assistant Vice-President said that "we knew from experience" which companies supply CIP systems. He said that he discussed suppliers with the engineer who designed the system; referred again to his talks with people at other dairies "to find out if their systems were working properly"; and said that the "experience and contacts" of the Plant Manager were helpful.

Asked whether he had seen relevant materials in any publications, the Assistant Vice-President mentioned the *Milk Dealer*, *Ice Cream Trade Journal*, *Ice Cream Field*, and the *Milk Plant Monthly*. He said he had seen articles on a CIP system in a plant and about new developments in CIP. Also, he said, "suppliers might have an ad showing CIP systems and developments."

The Assistant Vice-President, like his superior, named the engineer who designed the system as his most valuable source of information. "He is an authority on CIP systems," he said.

VII. Satisfaction With Purchase Decision

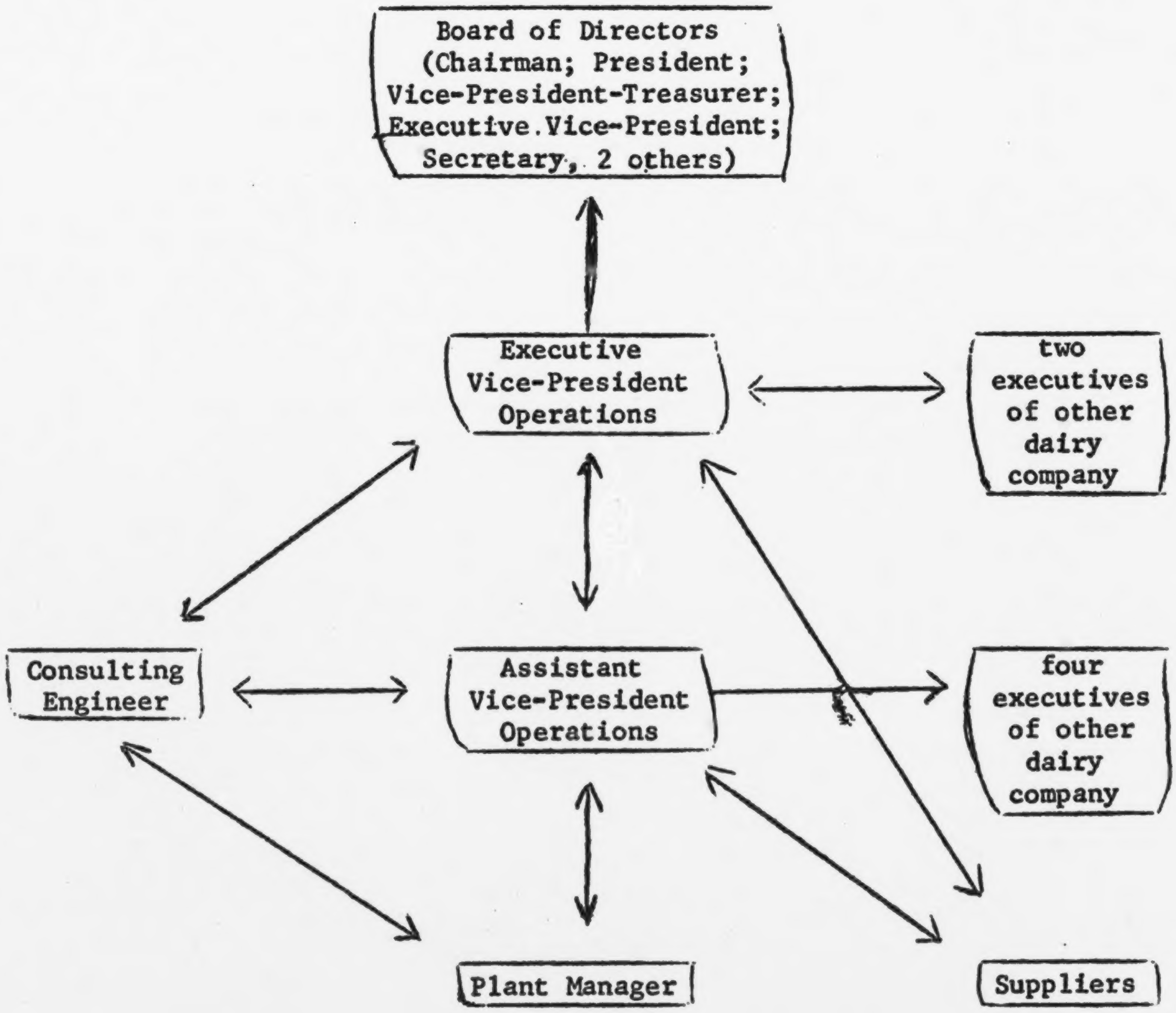
Both the Executive Vice-President and the Assistant Vice-President said that they had been completely satisfied with this purchase decision at the time it was made. The Executive Vice-President mentioned again the lower bid of the successful supplier. Also, he said, the successful supplier "is an old, established company and I felt they were stable and responsible." The Assistant Vice-President gave as a reason for his satisfaction the assurance received that the job would be performed satisfactorily. Also, he said, "because they are new in this business--CIP--we felt that this job was going to be very important to them." Both men said that they would make the same decision again now, if given the chance.

VIII. Summary Of Persons Involved In Purchase

Top Management: Executive Vice-President, Operations; Assistant Vice-President, Operations; Board of Directors (six, in addition to Executive Vice-President)	8
Manufacturing: Plant Manager	1
Other: Consulting Engineer; six dairy industry executives	7*
Total	16

*Possibly additional persons in dairy industry were also spoken to by the Executive Vice-President and Assistant Vice-President.

IX. Pattern Of Communications Concerning Purchase


Board of Directors (Chairman; President; Vice-President-Treasurer; Executive Vice-President; Secretary, 2 others)
Executive Vice-President Operations
two executives of other dairy company
Consulting Engineer
Assistant Vice-President Operations
four executives of other dairy company
Plant Manager
Suppliers

X. Supplier's Perception Of Purchase Decision

The person at the supplier company who was most involved in the sale was the General Sales Manager. He said that he had most contact with the Plant Manager and also had contact with the Assistant Vice-President and with the Executive Vice-President.

Asked who he thought took part in the decision to buy the product at this time, he named the Executive Vice-President. (This corresponds with the major role the decision attributed to this person by company informants.) Concerning ways in which the purchaser company knew about this supplier, he said that on the initial contact, a salesman left a brochure on a job done recently. Also, he said, this type of installation could have been seen in a dairy magazine. The Plant Manager, he said, asked for references and contacted dairies at which they had done work.

Asked who he thought decided to buy from his company rather than from another supplier, he again named the Executive Vice-President. (Company informants indicated that, although the Executive Vice-President approved the choice, the selection was influenced most strongly by the Assistant Vice-President.) "Other than price, they liked our ideas," he said. He added, "One has to be in on the negotiations, on quoting early. It's very important to be in on the initial discussion stages."

Purchase Decision Study
Survey Research Center*
University of Michigan

22. CASE STUDY: DECISION TO PURCHASE A MOLD FOR PLASTIC ORGAN PARTS

I. Purchaser

The purchaser is the main division of a company which is primarily a designer and manufacturer of high quality organs and pianos. This division produces a large number of organ models and has several plants within the same city. The Purchasing Department of the main division, where this study was done, employs eighteen persons. The division is completely responsible for its own purchasing.

II. The Product Obtained

The product obtained was a mold used for making plastic organ parts. The mold has a square shape with sides of about sixteen to eighteen inches, is about eight inches thick, and is made of solid steel. The mold can produce seven different organ parts at one time. The parts themselves are used to hold the contact springs in the organ. A contact spring is found under each key. The parts which are made in this mold hold this spring. As the Buyer described the function of these parts, "If you don't guide correctly, you don't make contact and the organ won't play." Thus, the parts made by this mold are extremely important for the assembly of the organ.

Prior to this purchase, a similar mold was used. The difference between them is largely a matter of design. The former mold made the parts individually, whereas the new mold is a "family type", making all seven parts at once. The mold was purchased for the main division of the company, although it is kept at the supplier company where the parts are made.

III. How Need For Getting Product Came Up

The mold previously used was located at Supplier X but owned by the purchaser. The need for purchasing a new mold first came up in April of 1966, when the supplier contacted a Buyer from the purchaser, and advised him that the old mold was worn out and that the supplier was having a great deal of difficulty making the parts. As the Buyer explained it, the vendor presented two alternatives: "either to purchase a new machine or to accept what amounted to a 30% (i.e. $25,000) increase in prices." The problem with these parts threatened production for the line of organs requiring the parts.

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*Interviewing for this study was conducted by the National Opinion Research Center.

IV. Deciding To Get A New Mold

After being notified about the mold, the Buyer contacted the Director of Purchasing and told him about the difficulties with the old mold. As the Purchasing Director described his role at this stage, "I reminded [the Buyer] we had to maintain production in some way and encouraged him to visit with the vendor. I told him to take other people from [the Purchaser company] with him to determine if reapirs could be made or if a new mold was necessary."

After his discussion with the Purchasing Director, the Buyer requested that a Production Engineer sit in on some discussions as a representative of Manufacturing Engineering and offer his suggestions concerning this problem. The Buyer also contacted the Tool Engineering Supervisor, Manufacturing Engineering Department, and asked that he see to it that the old die be evaluated. The Tool Engineering Supervisor, in turn, asked his General Tool Foreman to visit the supplier and make an evaluation of the present die. The General Tool Foreman did so, and advised the Buyer that the old mold was worn out and also made a report to his supervisor (the Tool Engineering Supervisor) to the same effect.

Other persons from the purchaser company were also involved in the evaluation of the old die during these early discussions. The Production Engineer from Manufacturing Engineering and a Quality Control Engineer, on request, advised the Buyer on the specification requirements for the mold. A Mechanical Project Engineer also went to the supplier to evaluate the tool and to verify for himself the necessity of purchasing a new mold. As he explained, "Problems were the cycling rate, reject rate, availability and also quality of parts [produced by the mold.]" Two Inspection Foremen and two additional Quality Control Engineers further discussed the need for the purchase with a fourth Quality Control Engineer.

The purchaser company was interested both in avoiding an increased price for the parts and in improving the quality of the parts being produced by the mold. These were, in effect, the two major reasons for the decision to purchase the new mold. The evaluvation of the old mold indicated that the parts being produced by the mold were out of tolerance, i.e., they were not to specification. As the Production Engineer from Manufacturing Engineering explained it, "The mold had come to the end of its life. It had been reworked four or five times and wouldn't take another reworking."

Even though the Buyer was responsible for making the decision, he said he felt that, "...in decision-making it often becomes self-evident what course of action has to be taken in order to best serve the company in terms of cost, savings and quality. It's not a personal thing I believe." Primarily from the reports of one of the Production Engineers and from one of the Quality Control Engineers, the Buyer decided that "there was no alternative" but to purchase a new mold, adding that it "was my conclusion on their advice." In addition, the Buyer spoke to a Material Control Supervisor and assured him that "he would not be limited in any way in ordering his requirements [parts to be made from the new mold] to any particular ratio."

V. Selecting A Supplier And A Particular Type Of Mold

The next step was the selection of a new supplier, both to provide a new mold and then to produce the necessary parts. The Buyer felt that the former supplier did not demonstrate an interest in the purchaser's problems. Also, at the time of the bidding the supplier was not competitve. For these reasons, the Buyer sought a new supplier.

Eight suppliers were considered by the purchaser company. The Buyer was mainly responsible for the final decision and arranged several small meetings during which the kind of mold to be purchased and the best supplier were discussed. Among the persons involved at this stage of the purchase were: The Manager of Research and Development, the Director of Purchasing, a Quality Control Engineer, the Chief Mechanical Engineer, a Senior Design Engineer, the Tool Engineering Supervisor, a Production Engineer, and the Mechanical Project Engineer.

Having made a tentative decision on the supplier, the Buyer called in one of their sales representatives for a conference. Several meeting took place with the supplier representative, during which the advantages and disadvantages of "family tooling" as opposed to an "individual type" mold were discussed. The supplier representative suggested that the purchaser try their particular "family" mold as opposed to the "individual" type mold.

The choice of the particular supplier was made for a variety of reasons. The Director of Purchasing mentioned "his unique approach to making the family mold...also his price was best, I believe." The Quality Control Engineer gave as reasons for the choice "delivery time, cost and previous quality. Also, [Supplier] company's attitude, meaning do they really want our business and are they concerned with the final product." The Chief Mechanical Engineer said that it was this supplier's "engineering know'how [which] decided me."

The decision to go to a "family type" mold was a very significant one and required a great deal of discussion. The Chief Mechanical Engineer probably best summarized the differences of opinion when he said, "One school of thought [believed] that we should not mold one organ series of parts in a given mold. In contrast...the other said that it would be cheaper to combine several parts of several organ series within one mold." As the Buyer explained, "Family type tooling in most instances puts you in a position of being limited to ordering in whatever 'ratios' you choose." The Purchasing Director helped to explain the question further, saying, "...often in a family mold many parts are wasted because when you run one you run them all." But he added that this was "not true in this instance", that this particular mold which the new supplier suggested "...offered us the flexibility to order each of the different parts in the mold in quantities we needed."

One large meeting, involving essentially the same set of persons involved in the series of smaller meetings indicated above, was held in which all aspects of the purchase were discussed. The Quality Control Engineer who acted as the collector of data explained, "[the] Buyer will propose several possible sources of this mold and present costs etc. to a panel who would be concerned with the purchase of this mold and our comments would be the deciding factor...we would evaluate such things as cost, delivery time, past quality, and company attitude, and other pertinent information."

The Quality Control Engineer, who had received information from his two Inspection Foremen, suggested that cost and the practicality of fabricating all the parts at one time settled the question on whether to buy a "family-type" mold. Since the new supplier suggested this type of mold and had such a unique approach in making it, the Buyer, with the support of the panel, decided to purchase the mold from them. The Manager of Research and Development, a Quality Control Engineer, the Chief Mechanical Engineer, and a Production Engineer, were particularly influential in this choice.

A requisition was prepared by the Buyer on September 22, 1966 and approved by the Director of Purchasing and by the President. A purchase order for the new mold was issued on September 30, 1966.

The Buyer then suggested to the Chief Mechanical Engineer that the Engineering Department make any changes they felt necessary in the design of the mold. Although the purchase order had already been placed with the new supplier, the Design Engineering Department still had four weeks to change anything in the design. The Chief Mechanical Engineer was largely responsible for the decision to alter the design of the new mold. He consulted with his engineers and found that the Senior Design Engineer had some ideas for a modification of the design.

The Senior Design Engineer, the Mechanical Projects Engineer, the Manager of Research and Development, the Tool Engineering Supervisor, and the Quality Control Engineer were the main people who worked on the design changes. The Buyer worked closely with the Manager of Research and Development and the Mechanical Projects Engineer on the new design and as he said, he "had a dozen contacts with [the supplier] discussing [the] usage on different parts." The Senior Design Engineer, the Mechanical Projects Engineer, the Chief Mechanical Engineer and the Quality Control Engineer were also in contact with the new supplier at this time, discussing and reviewing the best possible design they could furnish to produce the desired parts.

The Mechanical Projects Engineer worked with the Buyer on obtaining quotes from the supplier as to what the specific cost for changes would amount to. The Buyer received information from the Product Design Engineer which helped enable them to make the change to the new design. He also consulted the Production Engineer, the Chief Mechanical Engineer, and the Senior Design Engineer at this stage. The Manager of Research and Development was furnished with the technical information he needed from the Senior Electro-Mechanical Engineer from his department. He also received the opinions of the Production Engineer who had designed the original mold, of the Chief Mechanical Engineer, and of the Mechanical Project Engineer. The Senior Design Engineer discussed the design with the Chief Mechanical Engineer, with the Production Manager and also with the Buyer. The Tool Engineering Supervisor was given information about the usage of plastic parts by a Production Engineer.

Once the group concerned with this problem had come up with what they considered to be the best design and had obtained quotes as to the specific costs, the Chief Mechanical Engineer gave the design proposal his approval and the Buyer again presented a financial justification to the Director of Purchasing. The Buyer explained that it is fairly routine in the replacement of a tool that Design Engineering be given the option of changing the design and that generally this need not be approved. However, in this case, the change in design increased the price substantially and therefore another approval was required. The Purchasing Director gave his approval on the change and the entire situation was then presented to the President for final approval.

VI. Sources Of Information About Product And Suppliers

The Tool Engineering Supervisor received information about the "changes in the tool" at a meeting which was held to discuss the purchase. He considered a Production Engineer's information on the usage of the plastic parts in the manual organ most valuable, because he felt the Production Engineer had the most knowledge about the use of the plastic item in the end product.

The General Tool Foreman said that he did not get any information about the product as he was only involved in evaluating the condition of the old tool.

The Senior Design Engineer received relevant information directly from the Buyer. He considered his contact in the past with different molders and with the successful supplier (especially with reference to the multiple mold) to have been his most valuable source of information "because we have to know what they can do and then we compromise on what we need and they can do. We modify our design to the point where they are able to make a more reliable piece of equipment."

The Mechanical Project Engineer obtained information from the sales engineer of the successful supplier, whom the Buyer called in for a conference. From the supplier's sales engineer, the Mechanical Project Engineer received ideas about what changes in the mold design would be desirable. The sales engineer sent in a marked drawing showing the necessary revision (early stages.)The Mechanical Project Engineer believed the sale engineer to have been his most valuable source of information because he felt, "He was [the] most knowledgable, closest to [the] problem, and he took an interest."

The Manager of Research and Development said he had received opinions from a Production Engineer and that he "just happened to be standing there" when the Manufacturing Engineer came back from the supplier and discussed the matter. He questioned the Chief Mechanical Engineer and the Mechanical Project Engineer, and talked with the Director of Purchasing, who told him about the somewhat negative experiences he had had with the former supplier. The Manager of Research and Development considered one of his own men from Research and Development to have been his most valuable source of information. "He was furnishing me with all the information I needed in terms of the technical design aspect," he said.

The Production Engineer said that he did not receive any information about the product or suppliers, as he, too, was only involved in the evaluation of the old tool.

The Buyer siad, concerning sources of information about the product or suppliers, that the company's approach was "based on past performance...on judgment of capability from experience. We also solicited new people based on reputation or stature in the field. Also Dunn & Bradstreet reports." He mentioned two Production Engineers of the Manufacturing Engineering Department as being especially valuable sources of information within the company.

A Quality Control Engineer interviewed received relevant information through conferences with the Inspection Foremen, from incoming inspection files, and from previous personal contacts the other Quality Control Engineers had had with past suppliers. He felt that the conferences within the company were "quite conclusive" and mentioned that he was a "collector of data" for these meetings. He also consulted Buyer's Guide to Plastics and Plastics (a handbook) from which he gathered information on basic chemical content of plastics to be used in this mold. The Quality Control Engineer said that he felt the internal information which was real rather than theoretical was most valuable to him. He went on to explain, "It's not a hypothesis or projected idea but it is real; we know what the material can do."

The Chief Mechanical Engineer received information from the Buyer concerning both the product and supplier. He said he read Plastic News* and Plastics, in which he saw material about the ease of molding certain plastic material and the maintenance of critical dimensions. He considered the supplier's information most valuable, as "he knew the detail problems on tool design as well as molding problems of [the] materials we considered."

The Director of Purchasing obtained information from the Buyer who worked with the previous molded plastics supplier and who, he said, had also worked very closely with the engineers in their redesign. He considered the new supplier's information to have been most valuable to him.

The President was informed by the Director of Purchasing who, he said, "would come to him with a recommendation of one to three people and present to him the economic justification of the need." He felt that "the opinions of those responsible" were most valuable to him.

Summary: Number Of Persons (Of 11 Interviewed) Who Mentioned Information From Following Sources

Others in company	10
Supplier	5
Previous experience with this type of product or supplier of it	3
Standard reference work	2
Magazine	1

VII. Satisfaction

Asked to what extent they felt satisfied with the decision at the time it was made, three of the key men who worked on the design changes, plus the Purchasing Director and the President, said that they were "completely satisfied" with the decision. Three of these five men expressed their confidence in the supplier and offered this as the primary cause of their satisfaction. As one man put it, "The supplier's representative [is] capable and conscientious, technically and business-wise." Another mentioned the fact that they had "improved [the mold] considerably" as being another reason behind his satisfaction.

Two persons said, that they had felt only "fairly satisfied" with the decision at the time it was made. One of these men commented, "Only a fool is positive in plastics. When the tool is all done, it might not even produce the part." Another said that he felt that the "supplier is a reliable one" but that he questioned "the choice of the particular material used to make the part. [We're] now using implex and the mold was made for styrene plastic."

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*Probably was referring either to Durez Plastics News or Plastic News Front

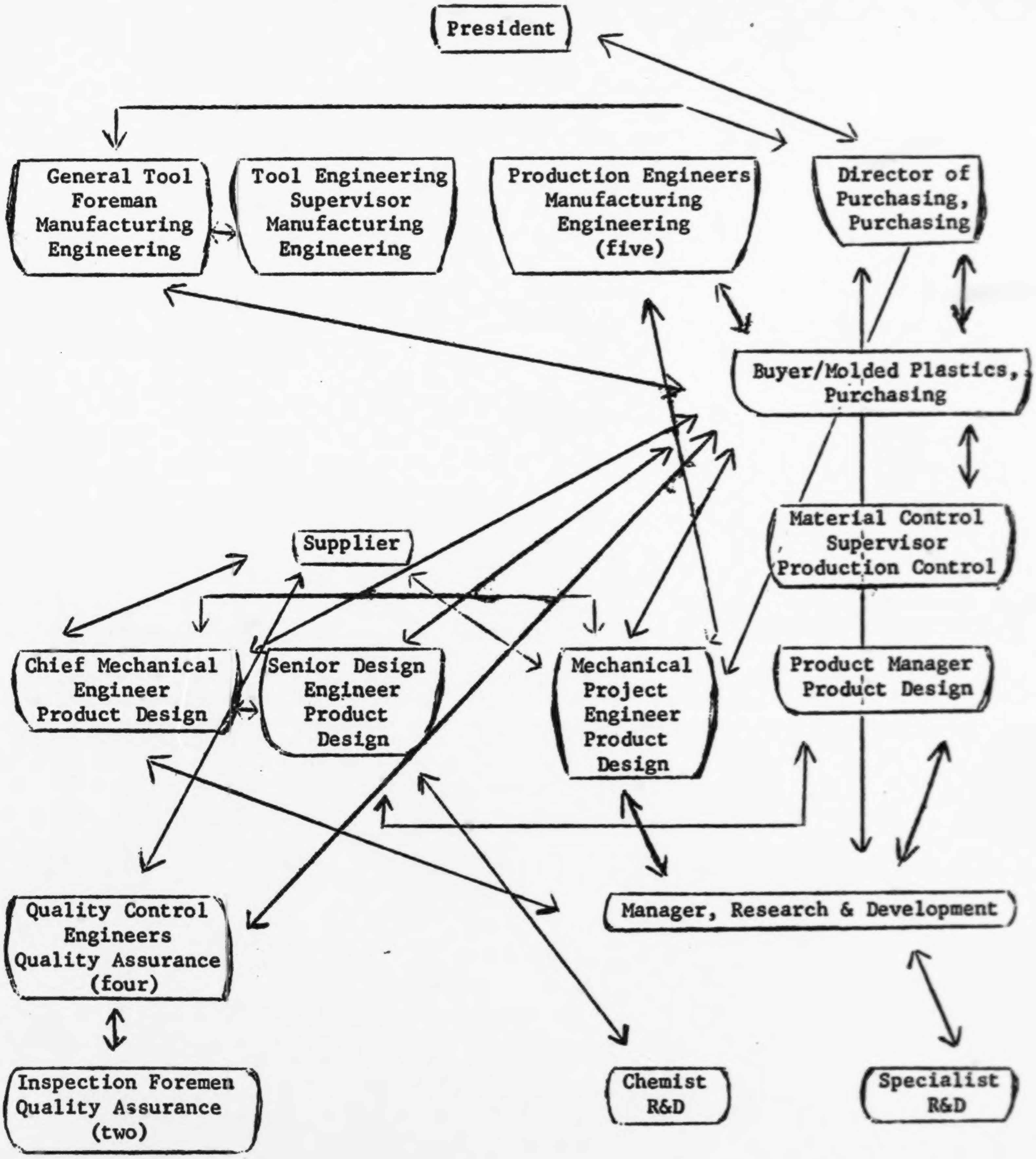
One man involved in the decision said that he was "not too satisfied" with the decision at the time it was made. He explained, "We tried to make our points [with the supplier.] In some [cases] we did and in some we yielded..." But mainly he felt dissatisfied because as he added, "...we really couldn't incorporate what we wanted."

Asked whether they would be willing to make the same purchase again, eight of the eleven respondents said that they would. Several again mentioned their general confidence in the supplier and their willingness to go along with the supplier's recommendations. Several among those who would make the same decision felt this way because there hadn't as yet, been any "hitches" and the job had been done "without any real difficulties." One key man seemed particularly enthusiastic, saying, "I feel we were able to take advantage of the latest engineering thinking and talent. When you consider that the state of art of plastic molding is new, this is quite a feat." One man said that he was "not sure" he'd be willing to make the same purchase again. He attributed this feeling to the fact that his "objectives were not fully achieved." Another said that he would not make the same purchase again because "I am a big believer in that where you have parts made in a mold they are not as precise as when making them in a stamping die." One additional respondent didn't feel he could make that judgment since he did not "know [the] details."

VIII. Summary Of Persons Mentioned As Involved In Purchase

Research and Development: Manager, R&D; R&D Specialist; Chemist, R&D	3
Product Design: Chief Mechan. Engineer, Sr. Design Engineer; Mechan. Project Engineer; Product Manager	4
Purchasing: Buyer, Dir. of Purchasing	2
Top Management: President	1
Production & Quality Control: Gen. Tool Foreman, Tool Engin. Superv., Quality Control Engineers (4), Production Engineers (5), Inspection Foremen (2), Material Control Supvr.	14
Total	24

IX. Pattern of Communication Concerning Purchase


President
General Tool Foreman Manufacturing Engineering
Tool Engineering Supervisor Manufacturing Engineering
Production Engineers Manufacturing Engineering (five)
Director of Purchasing, Purchasing
Buyer/Molded Plastics, Purchasing
Material Control Supervisor Production Control
Supplier
Chief Mechanical Engineer Product Design
Senior Design Engineer Product Design
Mechanical Project Engineer Product Design
Product Manager Product Design
Quality Control Engineers Quality Assurance (four)
Manager, Research & Development
Inspection Foremen Quality Assurance (two)
Chemist R&D
Specialist R&D

X. Supplier's Perception Of Purchase Decision

The sales engineer from the supplier said that he had most contact with the Buyer, "spent much time also" with the Senior Design Engineer, and also had contact with the Chief Mechanical Engineer. Asked who he thought took part in the decision to buy a mold at this time, he mentioned only the Buyer. The Sales Engineer thought that the purchaser knew about his company in part because of "our design reputation." Asked who he thought decided to buy from his company rather than from another supplier, the supplier representative again mentioned only the Buyer. He felt that his company was chosen as vendor because "we offered [purchaser] the most for the dollar spent, by our design of a combination to produce on e mold with seven parts."

Purchase Decision Study
Survey Research Center*
University of Michigan

23. CASE STUDY: DECISION TO PURCHASE A PIERCING PRESS**

I. Purchaser

The purchaser is one division of a large, mid-western-based, nationwide corporation. The entire corporation manufactures over seventy finished and unfinished products in plants spread out across the country. This division manufactures a variety of products including farm implements and plumbing products. The division is further divided into four sub-divisions; the sub-division for which the piercing press was purchased is the "mainstay" of the company and manufactures implement discs for harrows and other farm machinery.

Each division of the corporation is autonomous in its purchasing. This division employs eleven persons in its purchasing department. It handles all divisional purchasing; none is done at the corporate level.

II. The Product Obtained

The product purchased is a heavy-duty metal piercing press. It punches center holes in farm implement discs, at the same time stamping on data--the trade mark of the customer, the date, and the material of which the disc is made. This press, of "two point-suspension crankshaft type, single gear, single drive, with a 300 ton capacity", was purchased to supplement an older, lighter press which performs the same function but which has been overloaded and is subject to breakdown under the strain. The new press will be able to handle the larger, heavier discs which the company will begin to make, and to produce parts faster, so that the company does not have to continue paying overtime to get the required work done.

III. How Need For Getting Product Came Up

The Director of Manufacturing indicates that consideration of the need for a new press was prompted by "considerably higher sales forecasts," made in about June, 1966. These forecasts evidently came from the Sales Manager for Agricultural Products in the Sales Department.

*Interviewing for the study was conducted by the National Opinion Research Center, University of Chicago.

**The supplier company declined to grant an interview for this purchase case.

The Director of Manufacturing requested the Vice-President, Engineering Deaprtment, to undertake a "capacity evaluation" to determine whether or not the company would be able to produce enough equipment to meet the forecasted sales demands. The Vice-President for Engineering discussed with the Project Engineer, Subdivision A, "how the [old] press was standing up." A report on the subject was made by the Maintenance Superintendent, Engineering Department, who concluded, on the basis of his study of the matter, that "the old press was not adequate and that we really needed a new press." His report was confirmed by the Director of Manufacturing.

Discussion of the need for a new press also took place in regular management meetings whose members include the Director of Manufacturing; the Division Manager, Subdivision A; the General Foreman of the Machine Shop; and a Project Engineer, Subdivision A, in charge of agricultural products.

IV. Deciding To Get A Product In This Category

Once the need to increase production capacity had been established, formal proceedings were begun to support the decision to get the product. At the request of the Director of Manufacturing, the Engineering Department instituted what is called a "feasibility study" to determine the cost of the new equipment and--since some presses require more power to run them and more repairs to maintain them than do other presses--to decide what type of equipment would be most economical.

The Vice-President of Engineering received a copy of a letter written by the Division Manager, Subdivision A, to the Director of Manufacturing requesting the press and then, at the formal request of the Director of Manufacturing, the Vice-President Engineering turned the matter over to the Project Engineer, Subdivision A. "Officially, I would do nothing until (Director of Manufacturing) asked me to," the Vice-President Engineering noted. The Project Engineer, Subdivision A had in his words, "To decide what the specs of the press should be." The Chief Tool Engineer, Engineering Department helped to decide what the size and specifications of a new press would be. Also involved in the Engineering Department was the Senior Project Engineer for Machine Design.

Following the "feasibility" study, the Director of Manufacturing asked that an economic study be conducted by the Accounting Department in order to calculate depreciation on the press and "how soon it would pay off", i.e. bring in profits to compensate for investment and depreciation. This study also took into account possible company losses of revenue likely to result from failure "to gear ourselves to produce forecasts." As the Director of Manufacturing put it: "Projected profits were then used to justify the purchase of additional equipment. Since operations are presently extended to their limitations and require premium time operation [overtime], loss in profit is in direct relationship to the overtime we have to pay. The additional equipment can be run on straight time."

The company Secretary-Treasurer (also a Vice-President) "checked the figures" of the economic study to "see if they seem reasonable." The Secretary-Treasurer also mentioned having discussed the possible need for getting a new press with the Director of Research and Development (also Chief Metallurgist), with the Quality Control Manager, with the Director of Industrial Relations and with the Executive Vice-President. Referring to the diversity of persons involved in these discussions, he commented "these subjects come up."

Following reports from both Engineering and Accounting Departments, the Project Engineer, Subdivision A, sent a letter to the Director of Purchases requesting quotations for the specifications decided upon. Once these quotations were available from Purchasing, (with a Purchasing Agent participating at this stage) the Project Engineer, Subdivision A, compared them and itemized them in a chart. The Vice-President, Engineering and the Plant Engineer then decided together on "what's the best", and made out what is called a "reason sheet", which is, in the words of the Plant Engineer, "a request to [the parent corporation] for money to buy the press." Since all capital investments have to be approved by the parent corporation, final approval on the decision to purchase the press was given not only by the division President but also by the President of the Corporation, the Chairman of the Board, the Corporation Group Vice-President, and the Corporate Director of Manufacturing Services. The approval of the latter two corporate officers was more than a formality. Among other things, the Secretary-Treasurer noted that the Director of Manufacturing Services "would look throughout the company to see if there was another press available." The approval of the Corporate President and of the Chairman of the Board is required on purchases over $50,000.

One respondent quipped that "they have everybody but the Pope [in] on a decision like this." It appears that the wide division of labor necessary to conclude the purchase of a piece of capital equipment such as this means that no single individual carries the main share of influence or responsibility for the purchase decision. The Director of Manufacturing, who set in motion proceedings to get the press, was one of the most influential persons because as he himself put it, "I am the focal point betweeen the Sales Department and customer requirements, and am responsible for fulfilling those requirments. In this case, I specifically recommended an increase in productive capacity and [justified it] to the Engineering Department." The Division Manager, Subdivision A, was also influential; since he was "in charge of the press" and had "to keep it going"; he doubtless was intimate with the production problems posed by the older press. On the sales end of the situation, the Sales Manager, Agricultural Products, Sales Department, was seen by some as influential since he needed the larger discs in the greater quantity which the new press could provide. "He says he needs it, and if he can't get it he won't fulfill sales," the Plant Engineer said. Still another influential person was the Vice-President for Engineering, whose task it is "to specify all of the production equipment" and who is "responsible for keeping up the physical condition of the plant."

To summarize the reasons for the purchase of the press, it was obtained primarily because the company wanted to equip itself to meet forecasted higher sales demands by increasing its productive capacity. The new press would allow for the manufacture of larger, heavier discs. Secondarily it would relieve strain on the old press, and, by eliminating overtime fees, allow the company a possible savings of $10,000 annually. As the company President put it, the press was needed "to maintain our position in the industry; if we didn't have the press and the other broke down we'd be out of business."

V. Selecting A Specific Type Of Product And A Supplier

Altogether nine different press manufacturing companies were considered as potential suppliers during deliberations about this purchase. All of them manufacture several different size presses.

Although the order for the press was placed through the Purchasing Department, the actual choice of the supplier was done by key persons in the Engineering Department. As the Director of Purchases explained, "The specs were drawn up by Engineering. They decide what is necessary; we [the Purchasing Department] try to meet their requests." The company keeps a register of all manufacturers and equipment and the Purchasing Department gives Engineering a suggested list of suppliers compiled from "previous experience" with the suppliers.

After the specifications for the new press had been drawn up by the Project Engineer, Subdivision A, and by the Chief Tool Engineer, the Project Engineer sent a letter listing these specifications to the Director of Purchasing. The Purchasing Agent then got in touch with various press manufacturers in order to get quotations on a custom press. As he said, "You go to all the manufacturers who make such presses for the specs you require. This is the only way because they are made for your use. They look alike, but the inner workings are designed for you."

The Purchasing Agent provided the estimator of the successful supplier with the specifications as they were determined by Engineering. Since the successful supplier does not itself manufacture the presses but serves as "manufacturer's representative", the supplier estimator took the "specs" to the company that makes the machine, and then checked back with the purchaser to make sure that its specifications were met. The President of the company remarked that the Engineering Department also confeered with each of the possible suppliers "to decide which one they want." The Chief Tool Engineer, Engineering Department, met with a sales representative of the supplier finally chosen, who had come with literature to discuss equipment. Once quotations were obtained, the Project Engineer, Subdivision A, compiled them on a chart so that they could be compared. The principal influence in determining the supplier of the press was divided among three persons in the Engineering Department. As the Project Engineer, Subdivision A, said, "It's our job to see that the correct machinery is bought for the correct job." It was he who actually "made the final decision and it was never questioned" because "I'm in charge of that--I'm supposed to know what I want." His decision was, however, approved by the Plant Engineer--who also carried influence because he initiates all "reason sheets"--i.e., the purchase justification and requests for money. The supplier selection was also approved by the Vice-President Engineering who, according to the Scretary-Treasurer, "knows presses--[he has] forty years experience in deep drawing-steel language." The Vice-President, Engineering, saw the choice of supplier as a group decision. He said, "the group just decided; the ultimate user has the choice because he's the one to make it work, all other things being equal."

The successful supplier was chosen mainly because of its ability to meet the specifications decided upon by the Engineering Department. As the Project Engineer said, "if you can't get the press you want, you might as well not buy one."

The Secretary-Treasurer commented also, "In expensive equipment, reputation has a great deal to do with it. (Successful supplier) has a good reputation--they're known for doing the job..."

A requisition was signed on October 19, 1966 by the Plant Engineer and by the Chief Tool Engineer, Engineering Department and approved by the Vice-President, Engineering and by the Secretary-Treasurer. The purchase order, signed by the Purchasing Agent and approved by the Director of Purchases, was issued on October 21, 1966. The press is due to be delivered in 1968.

VI. Sources Of Information About Product And Suppliers

The Vice-President for Engineering got all of his relevant information concerning this purchase from the Project Engineer, Subidivision A, by means of the latter's letter to the Purchasing Department requesting quotations for specifications. ("It all comes in as potential supplier's quotations and specifications.") He felt that this was his most valuable source of information.

The Project Engineer (Subdivision A) had three sources of information: past experience with this particular type of press; the Purchasing Agent who supplied him with names of potential manufacturers and direct information from the supplier. He considered the last source, information from the supplier, to have been the most valuable to him.

The Purchasing Agent contacted the various suppliers of the type of press desired, told them the specifications, and then got quotations from them. He got information from the Director of Manufacturing, and from the Engineering Department. He considered his most valuable source of information to have been the quotations of the suppliers.

The Plant Engineer said that his most valuable source of information was (indirectly) the Purchasing Department. This information came to him through the Project Engineer, Subdivision A, who had contacted Purchasing. On the basis of this information, the Project Engineer made up a chart showing price, delivery date and specifications given by each supplier, which he then gave to the Plant Engineer.

The Chief Tool Engineer went to the Director of Purchases and to the Purchasing Agent for names of potential suppliers. Previous experience with similar types of presses was another source of information for this respondent. He said that his most valuable sources of information were the two men listed above in the Purchasing Department, because they "see all the salesmen in the country."

The Secretary-Treasurer (also a Vice-President) said that he got his information from the Vice-President for Engineering and from the Director of Purchases. The former told him the specifications of the press to be met, and the latter gave him a list of delivery schedules and prices. In this case, the respondent was in contact with no one outside the company. He considered the knowledge of the Vice-President for Engineering to be his most valuable source of information.

The only source of information mentioned by the Director of Purchases was the Purchasing Agent, who brought the respondent up to date on what had been done, what quotes had been received, and then how the choice of supplier was made.

Although the Director of Manufacturing said that he did not see much information, that which was of use to him was given by the suppliers, and he considered this to have been his most valuable source. He also mentioned past experience with equipment of a similar nature to have been helpful as a source of information.

The Division President apparently had little to do with the purchase of this product from this particular supplier in the first phases; he said that his company contacted the press manufacturers though the Purchasing Department, then through the Engineering Department. He said no one source of information was most valuable to him.

Summary: Number Of Persons (Of Nine Interviewed) Who Got Information From Following Sources

Others in the company	8
Had previous experience with this type of product or a supplier of it	3
Received direct information from the supplier	3

VII. Satisfaction With Purchase

Of nine key persons interviewed about this purchase, all said that they had been completely satisfied about this purchase at the time the decision was made. A number of persons mentioned the fact that the press purchased met all the required specifications. However, one Engineering deaprtment man said that "the only sad part is the delivery." Delivery is not expected until about eighteen months after the purchase order was completed.

VIII. Summary Of Persons Mentioned As Involved In Purchase Decision

Top Management: President, (Division); Vice-President, Engineering, (Division); Secretary-Treasurer (Division)*; Executive Vice-President, (Division); Director of Manufacturing Services (Corporation); Group Vice-President (Corporation); President (Corporation); Chairman of the Board (Corporation)	8
Engineering: Project Engineer, Subdivision A, Chief Tool Engineer; Plant Engineer; Maintenance Superintendent; Senior Project Engineer, Machine Design	5
Manufacturing: Division Manager, Subdivision A; Director of Manufacturing; General Foreman, Machine Shop	3
Technical Specialists: Director, Research and Development (Chief Metallurgist); Quality Control Manager	2
Purchasing: Director; Purchasing Agent	2
Sales: Sales Manager, Agricultural Products	1
Other: Director, Industrial Relation	1
	22*

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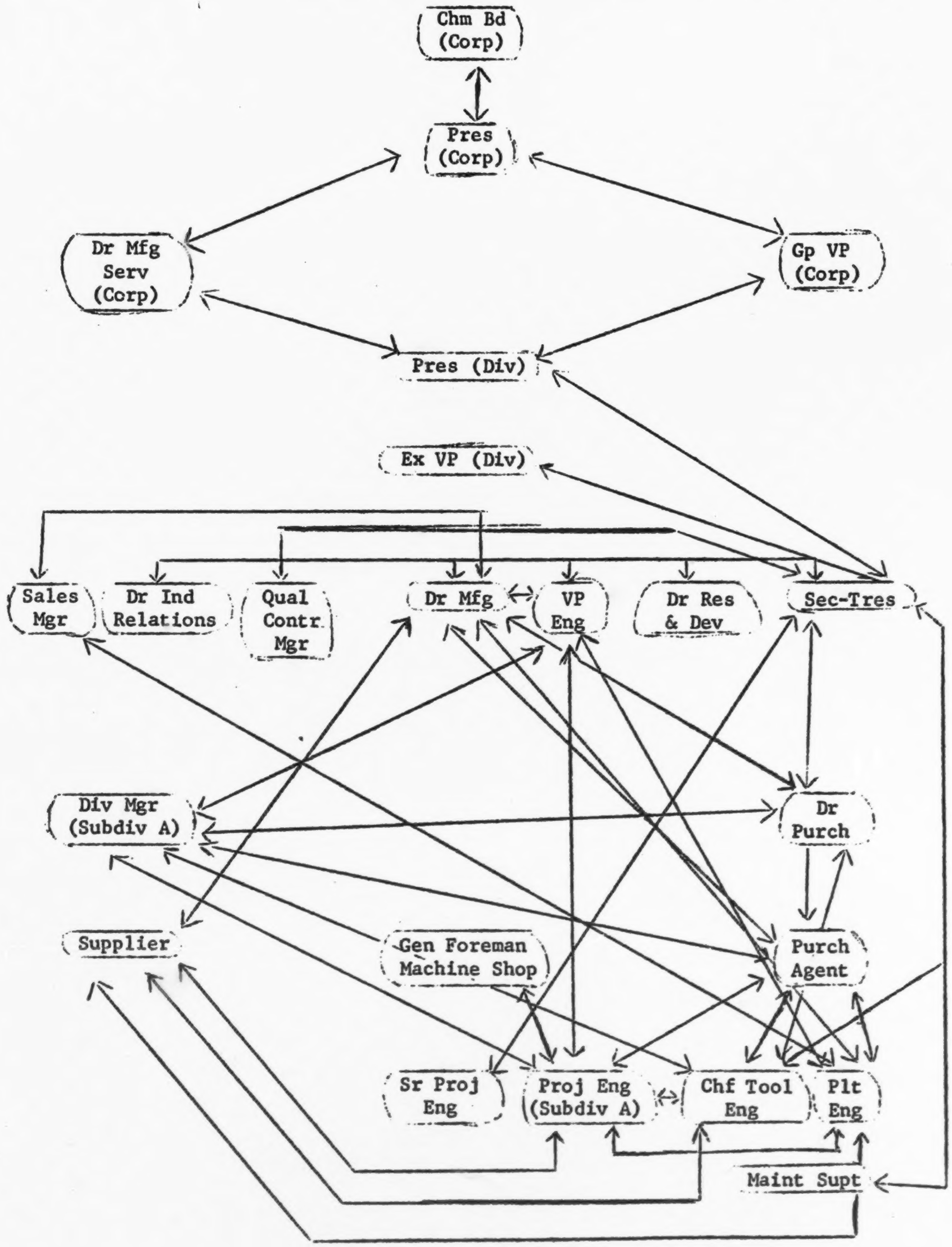
*Additional persons in the Accounting Department, under the supervision of the Secretary-Treasurer appearsto have been involved in the "economic study" for this purchase.

IX. Overall Pattern Of Communications



Purchase Decision Study
Survey Research Center*
University of Michigan

24. CASE STUDY: DECISION TO PURCHASE BODY-MAKER FOR CAN MANUFACTURE IN NEW PLANT
(AND BACKGROUND DECISIONS CONCERNING BUILDING OF NEW PLANT)

I. The Purchaser

The purchaser is the Can Manufacturing Division of a large food producing company. The company produces a wide variety of canned and frozen foods, including meats, fruits, vegetables, and juices. The company is administratively divided into four geographical divisions, plus the nation-wide Can Manufacturing Division. Each division encompasses a number of plants and the division handles its own purchasing. Under an administrative reorganization which followed the purchase studied here, a corporate official reporting to the Vice-President for Operations has the responsibility of establishing procedures for purchasing in the various parts of the company.

The decisions studied here were made in connection with a new canmaking plant which was built for a wholly owned subsidiary company.

II. Background: Decision to Build the New Plant

In about May 1965, people in the Operations Division of the company began to discuss what they perceived to be the necessity for creating new canning facilities. Prominently involved in this discussion were the Vice-President of the Can Manufacturing Division and the Director of Operations Engineering. The function of his department, the latter explained, is"to design and re-design, when necessary, the equipment used in (the company's) operations. We also choose the sites and lay out our new plants--working with the operations people in those plants so that when the plants go into operation there will be a minimum of difficulty and changing needed."

"We were growing beyond the bounds of our present cannery capacity," the Director of Operations Engineering said in explaining the impetus for discussion among Operations people. He noted, however, that it is not always the case that the initiative for plant expansion comes from Operations; sometimes Marketing takes the initiative.

It was decided to propose the closing down of a plant in Town B and the building of a new plant in Town C, twenty miles from Town B. At least part of the reason for this strategy appeared to be a tax consideration. On this point, the Manager of Production Planning and Purchasing of the Can Manufacturing Division commented, "We went into (Town C) because it was a depressed area and we found we could have a tax write-off for three years if we installed a new plant with 100% new equipment. We could use the old equipment from (Town B)--our nearby...plant and purchase new equipment for(the Town C plant.)"

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*Interviewing was conducted by the National Opinion Research Center. Interviews were conducted in April 1967 with the Director of Operations Engineering and the Manager of Production Planning and Purchasing, and in July 1967 with a Sales Engineer from the supplier company.

With this tentative decision made at division headquarters, the Director of Operations Engineering then visited the Town B Can Making Plant to broach the matter to the people there, who would be asked to man the new plant. The decision affected these people strongly. For one thing, "It could mean whether they would stay in their houses or would have to move," the Director of Operations Engineering noted. Moreover, the acceptance of the new plant by these people was seen by the division headquarters people as essential. "If you don't have people,you don't have anything," the Director of Operations Engineering commented.

The Director of Operations Engineering talked with about ten key people at the Town B plant including the Plant Manager, the Office Supervisor, and the line supervisors. "I got their feelings...got them to see the light," he said.

In the larger company, the proposal for construction of the new Town C plant first went, in about July 1965, to the (company-wide)Investment Committee, which includes the Vice-President of Operations (chairman), the Director of Operations Engineering (secretary), and representatives from Marketing, Accounting, and Research. At this stage, the Operations people submitted only rough cost figures--"a ballpark estimate," as the Director of Operations Engineering put it. The Investment Committee approved the new plant construction for inclusion in its budget. At this point, more precise cost figures for the new plant had to be prepared by the Operations Department prior to submission of a formal request to the company Executive Committee.

Selecting A Site

About a week after the Investment Committee had approved the new plant construction, the Director of Operations Engineering visited the Town B plant, at the request of the Vice-President of Operations, to discuss with the Town B Plant Manager the choice of a site for the new plant. The Plant Manager had selected several sites as possibilities but the Director of Operations Engineering concluded that these were not satisfactory and selected another site at Town C on a parcel of land already owned by the company. The selection of a site took place approximately in August 1965.

The Director of Operations Engineering said that he discussed this matter also with the Vice-President of the Can Manufacturing Division and with a Group Leader in his own department. He indicated that the site of the new plant had originally been intended to be at Town B, but had been moved to Town C. Concerning this switch of sites, the Director of Operations Engineering commented that there were no differences of opinion within the company. "However, if the businessmen of (Town B) had been more cooperative, we probably would not have considered moving the plant to (Town C). It was actually fortunate that we did not get their cooperation in procuring additional land because (Town C) has been in every way a better site."

Asked who had the most influence on this decision, the Director of Operations Engineering replied, "I did. The proper site and set up of any plant is my job and my decision." The decision on choice of a site required the approval of the Vice-President of Operations (and presumably the Manager of the Can Making Division) but did not need to be approved any higher in the company, except, by implication, as part of the further approvals of the whole project to build a new plant.

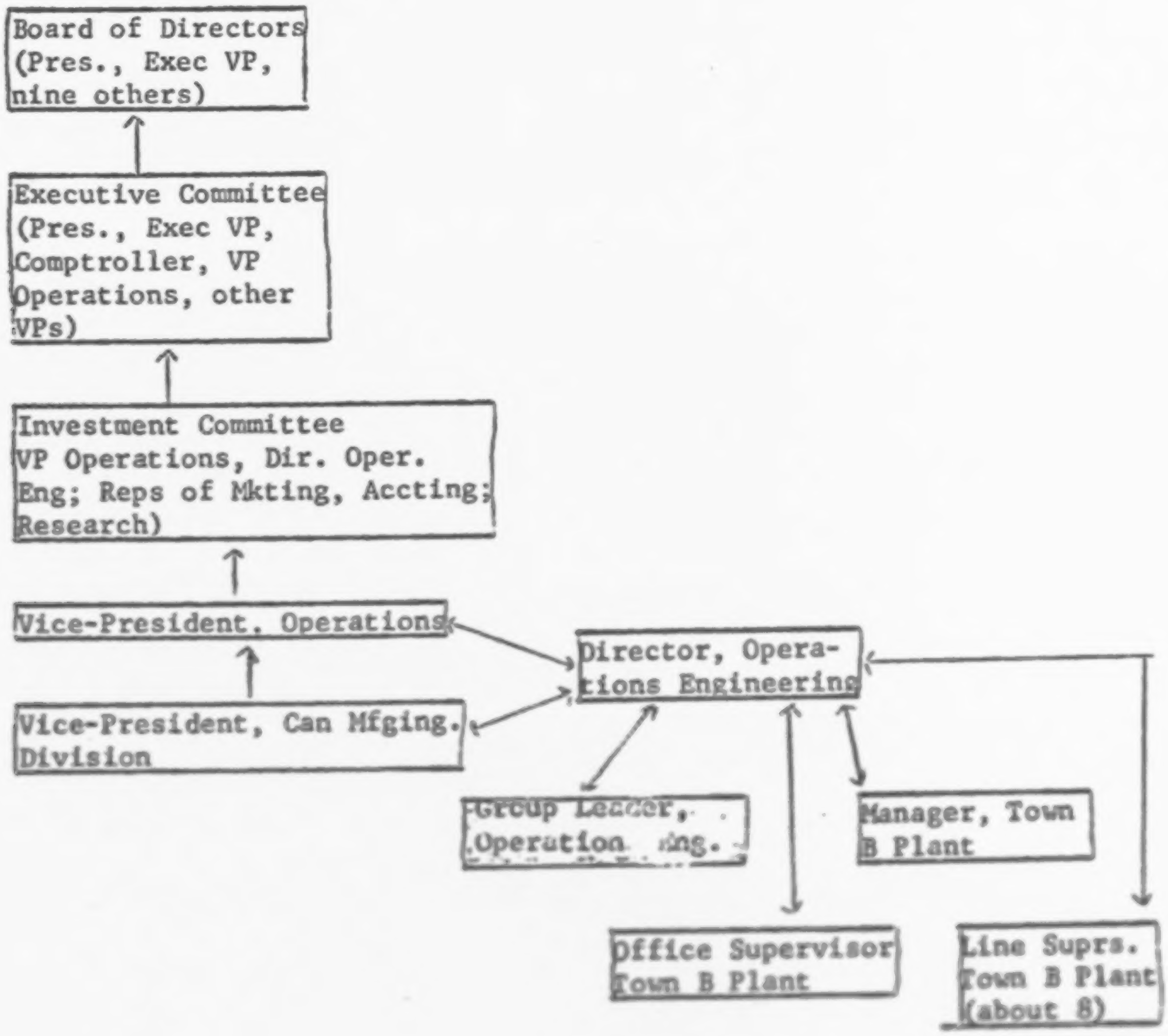
Further Approvals

Following the selection of a site and the preparation of exact cost figures, the proposal for the construction of the new can-making plant was passed from the Investment Committee to the Executive Committee. The Executive Committee is composed of the company President, the Vice-President of Operations (the link with the Investment Committee), the company Executive Vice-President, the Comptroller, and several other company Vice-Presidents. The Executive Committee approved the project and passed the matter to the Board of Directors, which is composed of the President, Executive Vice-President and nine other directors. Also in attendance at the Directors' meeting were the Vice-President for Operations and the Director of Operations Engineering. The Board of Directors reviewed the plans for construction of the new plant, as a part of the entire capital investment budget for the year, and approved the project. According to the Director of Operations Engineering, the period between the first approval by the Investment Committee and the final approval by the Board of Directors was about three months. Since he estimated the period of serious discussion prior to submission to the Investment Committee at about three months also, the entire decision-making process took, according to his estimate, about six months.

III. Summary of Persons Mentioned As Involved In Decision To Build New Plant, Including Choice Of Site.

Top Management:	Directors of company (nine); President; Executive Vice-President; Vice-President, Operations; ; Comptroller; Vice-President, Can Manufacturing Division; several other Vice-Presidents (as members of Executive Committee)	14+
Engineering:	Director of Operations Engineering; Group Leader	2
Production:	Manager, Town B Plant; Line Supervisors (about 8) at Town B Plant; Office Supervisor, Town B Plant	10
	Total	26+

IV. Pattern of Communications Concerning Decision to Build New Plant (As Mentioned by Director of Operations Engineering)


Board of Directors (Pres., Exec VP, nine others)
Executive Committee (Pres., Exec VP, Comptroller, VP Operations, other VPs)
Investment Committee VP Operations, Dir. Oper. Eng; Reps of Mkting, Accting; Research)
Vice-President, Operations
Vice-President, Can Mfging. Division
Director, Operations Engineering
Group Leader, Operation Eng.
Manager, Town B Plant
Office Supervisor Town B Plant
Line Suprs. Town B Plant (about 8)

V. Purchase of Body-Makers for New Plant

One of the purchases made for the new plant was for two body-makers for use on the can-making production lines. A body-maker is the machine that cuts and forms the body (i.e., the cylinder) of the can. It performs about six to eight operations and produces 450-500 cans per minute. This machine, the Director of Operations Engineering explained, is considered "the heart of the can-making operation...if it falters or breaks down or malfunctions, the whole line goes down, causing great production loss, etc." The two machines together cost between $150,000 to $200,000.

VI. Past Choice of Supplier

The company manufactured cans up until several decades ago but, the Director of Operations Engineering recounted, "we didn't stay on top technically and, since we were so far out of date, we found it less expensive to buy the cans at that time." However, in 1958 the company worked out a design for can-making machinery and began to purchase from Supplier A machinery built from the company's design.

The Director of Operations Engineering recalled the original choice of this company as follows: "We were negotiating with another company...Unbeknownst to anyone, including their local sales representative who had been working very closely and at great length with us, they waited until the afternoon we were to close the deal to tell us that they would not manufacture the machine according to our design but would sell us the style they were currently manufacturing and we could take it or leave it...When I came back to the office, I called (Supplier A)--I knew them well and thought a lot of their abilities. (He mentioned elsewhere that he was acquainted with Supplier A through calls by their sales representative.) I told them that if they would send some of their best people over immediately we had a proposition to offer them...They did come over at once, of course, and we closed the deal almost at once. It has worked out very well for both of us. We are completely satisfied with their work..."

VII. Current Choice of Supplier and Type of Body-Maker

The need for the recent purchases of the body-makers (as well as other can-making equipment) arose early in 1965 when plans for the new plant were first being discussed. The Vice-President of the Can Manufacturing Division brought the need for the additional can-making equipment to the attention of the Director of Operations Engineering.

According to the Manager of Production Planning and Purchasing, there are about six companies that make body-makers.

However, for the body-makers for the new plant, only the past supplier (Supplier A) was considered. "This is the machine we use in all our canning plants...the machine is made from our deisgn and is adapted for the special needs of each plant," the Director of Operations Engineering said. Further explanation of the almost automatic choice of the same supplier used previously came from the Manager of Production Planning and Purchasing, who commented, "We have adapted the body-maker over the years; we have about twenty in operation now. They are actually interchangeable if necessary and this is one of the most important factors in having just one supplier."

Both the Director of Operations Engineering and the Manager of Production Planning and Purchasing had contact with the Supplier A sales representative. The Manager of Purchasing said, "We are in constant contact, we discuss the machines we have all over the country. We talked about the adaptations needed for our machine at (new Town C plant)."

The duties of the Manager of Production Planning and Purchasing, Can Manufacturing Division include, he said, "scheduling the use, movement and replacing or purchasing new equipment for can manufacturing." He said he had a part in the decision to buy new can-making equipment for the new plant "only from the standpoint that our tax requirement and our policy for new equipment in a new plant required a new machine." The Manager of Production Planning and Purchasing said that he discussed the need for the new machinery with the Plant Manager of the Can-Making Plant in City A, where division headquarters are located, and with the Vice-President of the Can Manufacturing Division. The City A Plant Manager did not have a formal role in this decision but he was kept informed because it was anticipated at that time that he would soon become Vice-President of the Can Manufacturing Division.

Type of Machines

With regard to the specifics of the machinery at the new Town C plant, the Group Leader of the Non-Processing Equipment section of the Operations Engineering Department, one of four sections within this department, was in charge of preparing specifications for the body-makers. He was assisted by seven other men in this section who made recommendations concerning the equipment. The Director of Operations Engineering discussed the choice of specific machinery for the new Town C plant with the Vice-President of the Can Manufacturing Division and with the Manager of the new plant. He added, "We also had surveys made by several test-boring companies to make sure the ground we had chosen could carry the weight of our plant, which is about 3500 pounds per square foot, an extremely heavy weight."

Great influence in the choice of the type of machinery for the new plant was exerted by the Director of Operations Engineering. "Setting up this plant was my responsibility," he said. The Manager of Product Planning and Purchasing said that the Director of Operations Engineering "is the key man from an engineering standpoint. He determines equipment capability and design standards." However, the Manager of Product Planning and Purchasing named the Vice-President of the Can Manufacturing Division as exerting the most influence on the specific type of machinery for the new plant, saying, "He has the most information regarding can manufacturing."

In the early fall of 1965, as soon as the construction of the new plant had been approved, a purchase order for the body-makers was issued by the Director of the Operations Engineering Department and processed through Purchasing--specifically through the Manager of Production Planning and Purchasing.

Formal authorization for the expenditure was given by the division Comptroller, who would not, according to the Director of Operations Engineering, be likely to question the expenditure as long as it stayed within the budget allotted in the plans for the new plant. Also giving final approval were the Vice-President of the Can Manufacturing Division, the Executive Vice-President of the Company, and the Executive Board of the company. Delivery of the body-makers to the new plant was made in about September 1966.

VIII. Sources of Information About Body-Makers

Asked about ways in which he got information about machinery of this type or about suppliers of such machinery, the Director of Operations Engineering mentioned only, "I was familiar with (Supplier A)...my own knowledge of (this supplier) and what they could do."

The Director of Production Planning and Purchasing said, "for this specific purchase, we merely contacted our supplier, (Supplier A)...we have a contract with (Supplier A). Usually I use the Thomas Register, a listing of suppliers, and Dunn and Bradstreet. References from other companies play one of the strongest parts in my decision." (Note: Although the company had a contract with Supplier A, it was free to change to a new supplier at any time.)

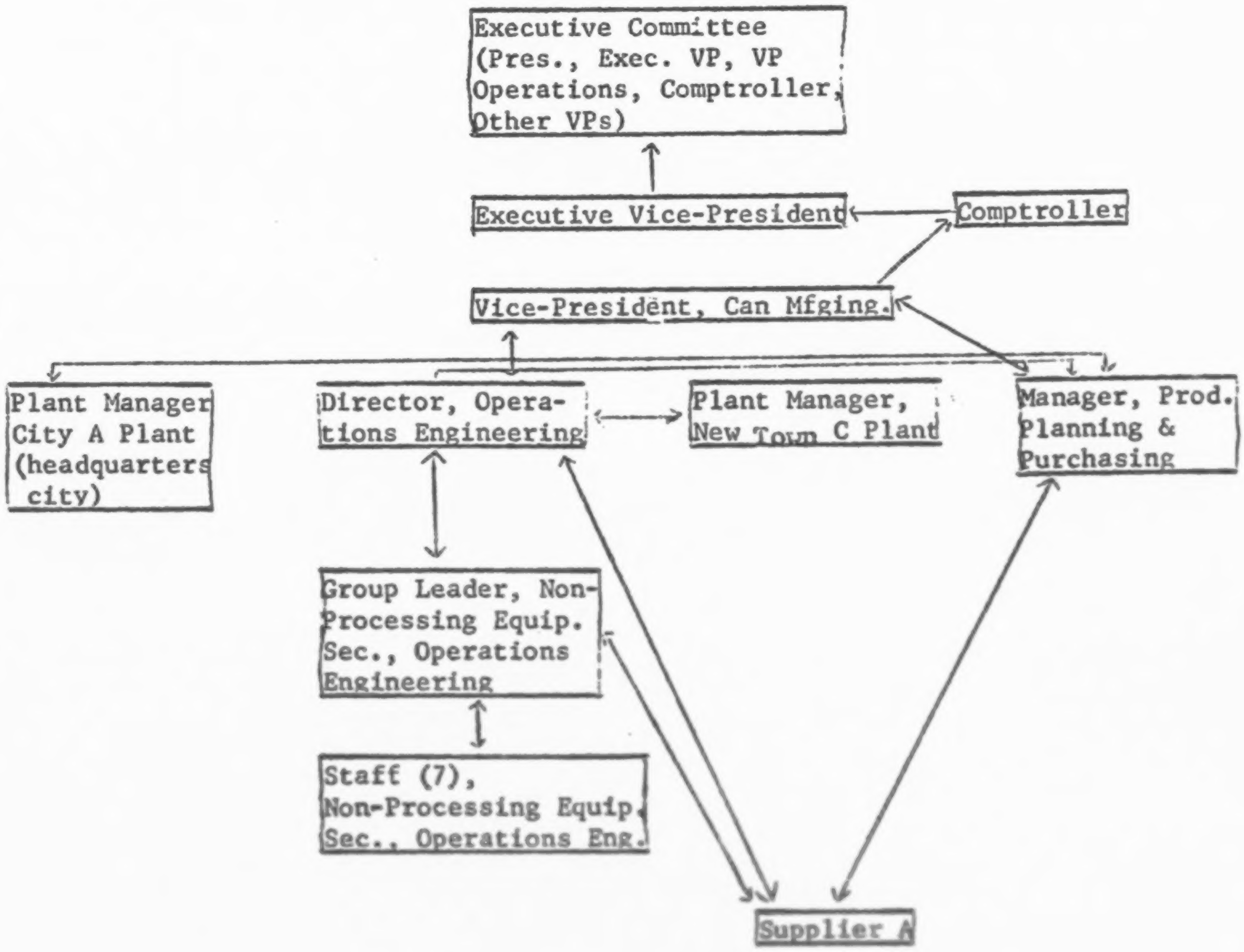
IX. Satisfaction With Purchase Decision

Both the Director of Operations Engineering and the Manager of Production Planning and Purchasing said that they had been completely satisfied with the purchase decision at the time it was made and would make the same decision again if given the opportunity. "They have worked very well with us through the years," the Director of Operations Engineering commented. "They are very willing to go along with out suggestions and their engineering staff and ours work well together."

X. Summary of Persons Mentioned as Involved in Purchase of Body-Makers

Top Management:	President; Executive Vice-Pres.; Vice-Pres., Operations; Comptroller; other Vice-Pres. on Executive Committee; Vice-Pres., Can Mfging. Division	5+
Operations Engineering:	Director; Group Leader, Non-Processing Equipment Section; Staff, Non-Processing Equipment Section (7)	9
Operations:	Plant Manager, Town C Plant; Plant Manager, City A Plant	2
Purchasing:	Manager, Production Planning and Purchasing	1
	Total	17+

XI. Pattern of Communications Concerning Purchase of Body-Makers


Executive Committee (Pres., Exec. VP, VP Operations, Comptroller, Other VPs)
Executive Vice-President
Comptroller
Vice-President, Can Mfging.
Plant Manager City A Plant (headquarters city)
Director, Operations Engineering
Plant Manager, New Town C Plant
Manager, Prod. Planning & Purchasing
Group Leader, Non-Processing Equip. Sec., Operations Engineering
Staff (7), Non-Processing Equip. Sec., Operations Eng.
Supplier A

XII. Supplier's Perception of Purchase Decision

The regional Sales Engineer at the supplier company, who had most contact with persons at the purchaser company, said that he had most contact with the Group Leader of the Non-Processing Equipment Section, Operations Engineering (whom he incorrectly identified as "Manager of Can Manufacturing") and also had contact with the Director of Operations Engineering.

Asked who he thought it was who took part in the decision to buy the body-makers at this time, he named the Vice-President of the Can Manufacturing Division. He believed that it was this Vice-President and the Director of Operations Engineering who decided to buy the machinery from them. (These men did seem to be the key persons involved.)

Concerning the reasons for this choice, the Sales Engineer said he felt it was, "because of our good relationship in the past. We are always willing to make any changes in equipment that they request, where other companies won't...the prime reason is that we will tailor our machines to fit their needs."

Purchase Decision Study
Survey Research Center[*]
University of Michigan

25. CASE STUDY: DECISION TO PURCHASE A COAL CRUSHER

I. Purchaser

The purchaser is an engineering plant of a larger company which has branches throughout the country. This plant operates as a "job shop" and makes primarily moving equipment (e.g., coil conveyors for handling steel in a steel mill) and processing materials (e.g., mechanizing a foundry). Each plant of the larger corporation functions independently with respect to purchases.

II. The Product Obtained

The product purchased is a coal crusher for a new coal crushing plant being build by the company for a steel firm. A coal crusher is a rotary drum; its surfece is covered with perforated plates and is fitted on the inside with lifters. As the run of mine coal is fed into it, the material smaller than the perforations passes through the drum. The coal crusher breaks up mine run coal as it comes from the mine to less than four inches in diameter and removes unbreakable rock (and other foreign material) of larger than four inches diameter. This process as accomplished by the crusher is done prior to washing, drying, and sorting.

III. How the Need Came Up

The need for the coal crusher arose in May 1966, according to the Chief Buyer, because a customer had asked the company to build a coal crushing plant. There was never any question within the company as to whether a coal crusher would be purchased. As the purchasing Agent said, "...any coal crushing plant needs a coal crusher." Discussion centered around the choice of type of coal crusher and of supplier.

In the late spring and early summer of 1966, a Divisional Engineer, Engineering Estimating Department, discussed the choice of type of coal crusher with two Consulting Mechanical Engineers and with a Sales Engineer in the Company. The latter conferred with the customer as to its preference about type of coal crusher. Meanwhile, the Chief Buyer discussed the purchase of a coal crusher with the Divisional Engineer in charge of Engineering Estimating.

IV. Type of Crusher Selected

There are two types of coal crusher, "roller" and "breaker." The Divisional Engineer, Engineering Estimating Department, said that the selection of the type of coal crusher to be purchased "was a basic decision to be made before we proceeded to get quotations." It was, he said, his responsibility to choose the type of coal crusher and to "point out the various applications of pressures, suitable to this product," as well as the differences in cose of operating maintenance between the two different types of coal crushers.

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[*] Interviewing for this study was done by the National Opinion Research Center, University of Chicago. The Purchasing Agent; the Chief Buyer; a Divisional Engineer, Engineering; and a Divisional Engineer, Engineering Estimating; as well as a supplier's representative, were interviewed In January, 1967.

The Divisional Engineer, Engineering Department, said that there had been some difference of opinion with regard to which type of coal crusher to purchase--a breaker or a roller. This difference was resolved, he said, by studying the characteristics of the run of mine coal and by deciding to remove as much rock as possible before further processing, which necessitated using a breaker type of coal crusher.

With regard to the choice of the particular product, the reasons, then, were twofold: One, the oversize refuse material dictated the desirability of purchasing a breaker type of coal crusher; and second, the performance of this particular type of equipment under similar operating conditions had been satisfactory, based on past experience with this type of coal crusher at otherplants which this company had set up.

It was the consensus of the respondents that the Divisional Engineer, Engineering Department, had had the most influence in the selection of the type of coal crusher, because it was his job to engineer the coal crushing plant to work. However, the customer was also influential in the choice of type of coal crusher, because there was a clause in the contract between the customer and the company which stated that the make and type of larger purchased finished components would have to be approved by the customer company.

V. Choosing a Supplier

Once the type of coal crusher to be purchased had been decided, the next step was for the Purchasing Agent to request bids from suppliers based on information supplied by the Engineering Department concerning the type of crusher desired. Of five possible suppliers mentioned by respondents, three were seriously considered in this case, i.e., were asked to make bids. The suppliers which were considered sent in many pamphlets and brochures with their quotations, which explained the advantages and operation of their products. In addition, local sales representatives of the three suppliers called on the company after bids had been requested. Also, the sales manager of the successful supplier called on the Chief Buyer.

The Divisional Engineer, Engineering Estimating Department, said that he reviewed the price quotations of the suppliers. He discussed the choice of supplier with the Purchasing Agent, Purchasing and with the Sales Engineer, Sales, the latter consulting the customer with regard to their preference. The Divisional Engineer, Engineering Department, whose job it was to analyze the bids from the standpoint of meeting engineering performance, said, "The return bid will describe the particular vendor's product in detail, with particular emphasis on the moving parts. They all quote their weights of machine. This gives us a clue as to their particular machine." To help in the selection of supplier, the Purchasing Department made a "flow sheet," based on information received from the Engineering Department. "We like Engineering to tell us which of the three (suppliers) they would prefer, all other things being equal. Then we take over from there," said the Purchasing Agent. The Purchasing Agent was consulted by the Chief Buyer, whose job it was to get the suppliers' quoted prices down to match the cost estimates made by the Purchasing Department, and by the Divisional Engineer, Engineering Estimating Department, with regard to choice of supplier.

The Purchasing Agent and the two Divisional Engineers believed that the Chief Buyer had the most influence on the selection of the supplier, because the final selection was based on price, about which he knew the most.

Another factor influencing the choice of a supplier was what respondents termed "reciprocity"--i.e., buying from suppliers who are themselves customers of the company. "We try to take care of the people who take care of us," one respondent explained. The supplier chosen was a customer of the company, while one other supplier considered was a competitor. The equipment of the two suppliers was equivalent. However, one respondent explained, had price been too far out of line, "reciprocity could not swing it," although he did add that it was preferred by the customer company, provided that the price was competitive with that quoted by other suppliers.

Once the type of coal crusher and supplier were selected and final approval was given by the customer company, the purchase order was signed, on September 15, 1966, by the Purchasing Agent.

VI. Sources of Information about Product and Suppliers

The Divisional Engineer, Engineering Department, said he got information about coal crushers and their suppliers from the vendors' bids and vendors' pamphlets describing their particular machines and from advertisements of rotary breakers in *Coal Age*. He considered the vendors' pamphlets to be his most valuable source of information.

The Divisional Engineer, Engineering Estimating Department, said he got relevant information from general catalogs on coal crushing, from local sales representatives and their quotations, and from one of the two consulting engineers retained by the company who had had background in this field. He listed his most valuable source of information as being the local sales representative of the successful supplier because of the man's "knowledge and his ability to explain the details on it."

The Purchasing Agent, Purchasing Department said he acquired his information from past experience in setting up coal crushing plants; from quotations and literature from the three vendors; and from the Divisional Engineer, Engineering Department. He considered his most valuable source of information to be that contained in the literature from the vendors.

The Chief Buyer, Purchasing Department said he got information from a standard reference (The *Thomas Register*), from publications (*Iron Age*, *Production and Steel*), from salesmen and their brochures, and from the Engineering Department. Each of the publications mentioned had, he said, relevant advertisements and forms which he filled out and returned to each of the three publishers for additional information about the products advertised (coal crushers). He felt that the manufacturers' brochures were his most valuable source of information because they "go the furthest to tell you about it; of course, he doesn't tell you what's bad about it."

VII. Satisfaction with Decision

All those interviewed said that they had been completely satisfied with the purchase decision at the time it was made. Reasons given included the fact that the quoted price matched the estimated cost as assessed previously, the excellent reputation of the supplier and past favorable experience with the supplier's other products.

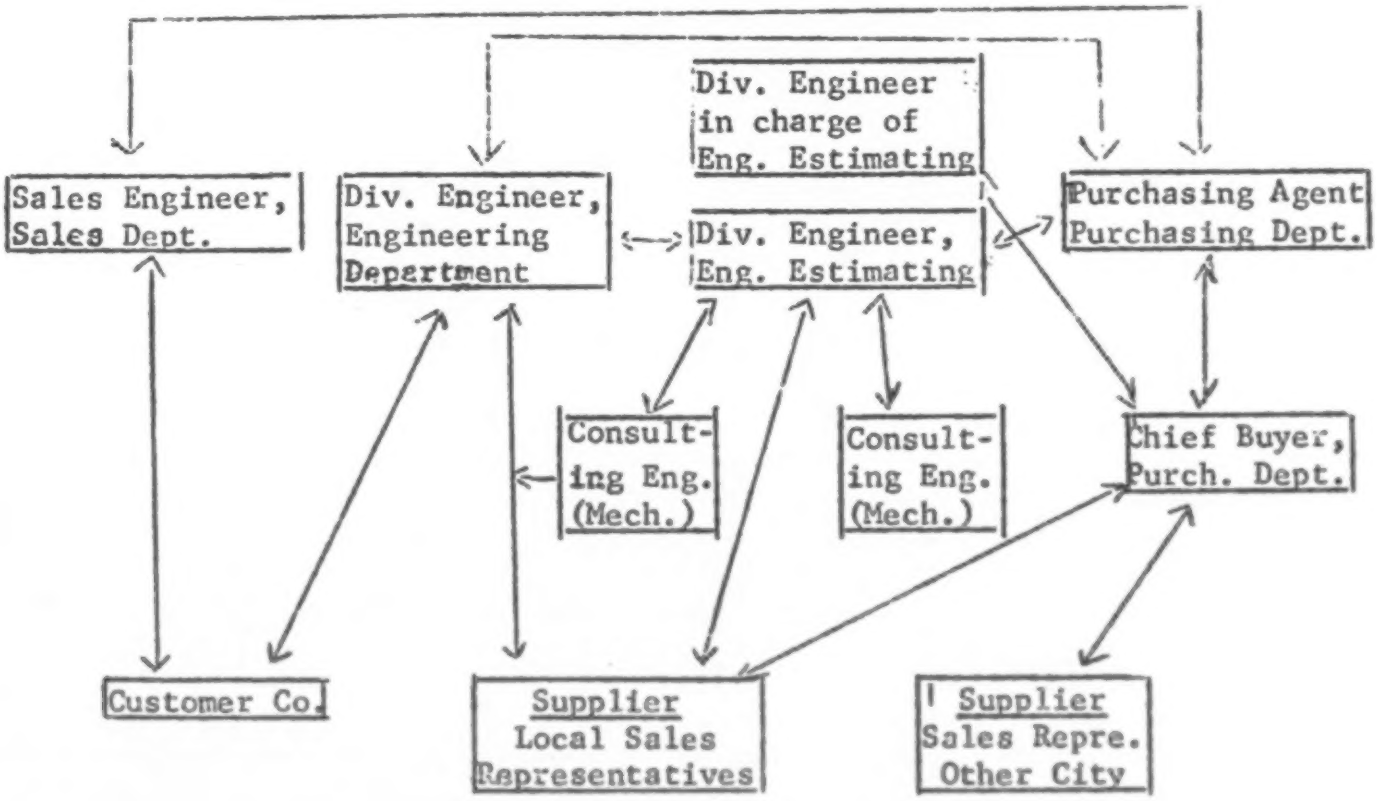
Asked if they would favor making the same decision again, given the opportunity, all four respondents said they would. The Chief Buyer summed up his feelings in saying that "It's a good machine and the price was right."

VIII. Summary of Persons Mentioned as Involved in Purchase*

Engineering: Divisional Engineer, Engineering; Divisional Engineer in charge of Engineering Estimating; Divisional Engineer, Engineering Estimating; Consulting Mechanical Engineers (2)	5
Purchasing: Purchasing Agent; Chief Buyer	2
Sales: Sales Engineer	1
Total	8

*Also involved were an unspecified number of persons at the customer company for whom the purchaser company was building the coal-crusher plant.

IX. Overall Pattern of Communication Concerning Purchase*


Div. Engineer in charge of Eng. Estimating
Sales Engineer, Sales Dept.
Div. Engineer, Engineering Department
Div. Engineer, Eng. Estimating
Purchasing Agent Purchasing Dept.
Consulting Eng. (Mech.)
Consulting Eng. (Mech.)
Chief Buyer, Purch. Dept.
Customer Co.
Supplier Local Sales Representatives
Supplier Sales Repre. Other City

*Since an organizational chart was not available, the organizational relationships shown on the above chart may not be precisely correct.

X. Supplier's Perception of Purchase Decision

Of four persons at the supplier who had any contact with people at the purchaser company, the local manufacturer's agent had the most such contact. He reported having had contact with the Chief Buyer, with the Divisional Engineer of the Engineering Department and with the Sales Engineer.

Asked who he thought it was at the purchaser company who took part in the decision to buy the coal crusher from his company, rather than from another supplier, he mentioned the Divisional Engineer, Engineering Department, the Purchasing Agent and the Chief Buyer. (These persons, especially the Divisional Engineers and the Chief Buyer were, in fact, key men in the purchase.) With regard to the reasons for the choice of his company as the supplier, the manufacturer's agent thought it was "very likely" that the purchaser company's customer (for whom they were building the coal-crushing plant) found this supplier crusher "very acceptable to them." He conjectured further that the Divisional Engineer's "analysis of the three machines offered" might have been important since the ultimate user's approval "might have been on his recommendation."

26. CASE STUDY: DECISION TO PURCHASE A TRACTOR TRUCK

I. Purchaser

The purchaser is the main division of a company which is primarily a designer and manufacturer of high quality organs and pianos. This division produces a large number of organs models and has several plants within the same city. The Purchasing Department of the main division, where this study was done, employs eighteen persons. The division is completely responsible for its own purchasing.

II. The Product Obtained

The product obtained is a tractor truck. A tractor truck is the front or cab part of a truck, which has a base onto which trailers can be attached. One of its important advantages is its ability to pull any series of trailers. The trailer attached rides on a fifth wheel of the tractor. This truck was purchased for the purpose of delivering wooden cabinets between the various plants of the company, during the first stages of assembly. Before the purchase, the plant used a 1958 model tractor truck, of the same make. Prior to 1958, a regular hauling truck was used as the volume of business did not require a large load capacity at that time.

III. How Need For Getting Product Came Up

The need for a new vehicle was brought to the attention of the Production Control Manager, Production Control Department, by the Traffic Supervisor, Production Control Department, during the preparation of the annual budget in April, 1965. The Traffic Supervisor indicated that there had been a significant increase in repair and maintenance costs for the truck then being used. The truck was roughly eight years old and had a mileage of 130,000 miles. It was generally in need of repair, including motor and brake repair, and the body was rusting out, leaving the fenders and running boards only loosely attached to it. The repair necessary for the motor would have been very costly. For these reasons, the Traffic Supervisor decided to discuss the condition and expense of the functioning vehicle with the Production Control manager, who (among other things) is responsible for the shipping and handling of all finished goods. The Traffic Supervisor spoke with the Production Control Manager about the condition of the truck and asked that the purchase be proposed in the budget for the current or following fiscal year.

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* Interviewing for this study was conducted by the National Opinion Research Center

Summary: Persons Mentioned As Involved In Discussion Of Need

Production: Production Control Manager	1
Services: Traffic Supervisor	1
Total	2

IV. Deciding To Get A Product In This Category

Having been advised of the condition of their current truck by the Traffic Supervisor, the Production Control Manager had to make a judgment as to whether its condition was poor enough to require the purchase of a new truck. In making this judgment he was evidently much influenced by the opinion of the Traffic Supervisor; the latter felt he had great influence on the decision to buy the truck saying, "they kind of respect our decisions on maintenance and accept our opinion therefore." Had the Production Control Manager not been convinced by the Traffic Supervisor of the need for the truck, the matter would have gone no further. But, as the Production Control Manager explained, he felt it "uneconomical to continue with a vehicle which required constant repair." So after reviewing his own departmental budget, the Production Control Manager approved the Traffic Supervisor's requisition, asking that the vehicle be entered into the next fiscal year's budget. The requisition was then forwarded to the Director of Manufacturing whose approval was also required. He discussed the need and condition of the vehicle with the Production Control Manager, who is under his supervision. The Director of Manufacturing indicated that he is in favor of delegating authority to those responsible and usually accepts their word on a replacement. He, then, also gave his approval and submitted the requisition to the President whose final approval was necessary. The President noted that the purchase of a truck "would require the division or department head to submit a request to demonstrate need and also to submit alternative proposals."

Summary: Number Of Persons Involved In Decision To Get Product In This Category

Top Management: President	1
Production: Production Control Manager, Director of Manufacturing	2
Services: Traffic Control Manager	1
Total	4

V. Selecting A Specific Type Of Product And A Supplier

A number of potential truck suppliers were available to the purchaser, all of which made several kinds of trucks. Six of the potential suppliers were considered. One of these had previously been a supplier to the company, and there seemed to be a general consensus among those concerned (including the opinion of two drivers of the truck who were consulted) that this company's product would prove most reliable. Still, the Director of Manufacturing, the Manager of Production Control, and the Buyer all felt it wise to read the current literature and reports; moreover the Buyer called in several other supplier representatives.

The Traffic Supervisor, Production Control, was most influential in choosing both the type of truck to be purchased and the supplier, since, as one of his superiors said, "he has to live with it." After discussing the need for a new vehicle with the Production Control Manager, the Traffic Supervisor contacted a salesman from the successful supplier who gave him the latest specifications and brochures on their current model tractor trucks. He also consulted two of his four drivers who offered their suggestions and recommendations. The Traffic Supervisor also received advice from the Buyer, Purchasing, who recommended a particular supplier for reasons of price, delivery, and the supplier's locations.

Both the Buyer and the Traffic Supervisor met with the supplier representative during the time that the purchase was being considered. The Buyer initiated an interview with the sales representative along with a request for literature on the subject. He requested some quotations from the sales representative and was also interested in expediting the delivery. He then set up an appointment for the supplier salesman to meet with the Traffic Supervisor to determine the extent of the company's needs and to review the condition of the trade-in.

When the Traffic Supervisor met with the salesman, they discussed truck specifications and the requirements of the purchaser. Such subjects as the average load and distance of travel were considered in relation to the truck axel, springs, size of tires, type of motor, brake system (air or vacuum brakes), etc.

After forming an opinion about the type of truck to purchase and the supplier which he preferred, the Traffic Supervisor gave his recommendation to theProduction Control Manager; this recommendation was in accord with the opinion of the Buyer. Both men felt that the successful supplier sold products of high quality and were further assured by its reputations and known reliability. The fact that this supplier offered repair service at night was also an important factor, as the company needed the truck in working condition at all times. Rental costs would amount to $85 per day, but any truck purchased from this supplier could be brought in for repair at night and put into working condition by the following day. Another determining factor was that the supplier's service facilities were conveniently located.

The specific type of truck chosen was a duplicate of the one previously used. As the Traffic Supervisor explained, the older truck "...had given us quality" and had only needed "a minimum amount of maintenance." Finally, the price was comparable with Those of other suppliers

The Traffic Manager sent his recommendation as to the type of truck and supplier for the purchase to the Production Control Manager, who concurred. The Production Control Manager then brought the matter to the attention of the Director of Manufacturing. The Director of Manufacturing said "I would like to try (a different supplier) but I take the judgment of my operating people." In this case, he approved the choice of his subordinates. Finally, the company President, who indicated that he generally accepts the judgment of the persons directly responsible, approved the purchase order sent by the Director of Manufacturing.

After the purchase order was signed on January 3, 1966, the Production Control Manager spoke with supplier salesman concerning delivery of the truck. He was particularly anxious to see to it that the new truck would be made immediately available. It was delivered on February 10, 1966.

Summary: Persons Involved In Choice Of Model And Supplier

Top Management: President	1
Production: Director of Manufacturing, Production Control Manager	2
Purchasing: Buyer	1
Services: Traffic Supervisor, two drivers	3
Total	7

VI. Sources Of Information About Product Suppliers

Asked about the ways in which they got information about trucks or about suppliers of trucks, respondents gave the following information:

The Traffic Supervisor had gained information about the supplier and the product from past experience with use of their trucks. He spoke with the sales representative of the previous supplier who gave him the latest specfications, reports and brochures on their current model tractors. He also checked on several other suppliers for comparison. Finally, he asked two drivers for recommendations and suggestions. The Traffic Supervisor considered the fact that this supplier is one of the top sellers to be a particularly valuable point of information.

The Production Control Manager was directly informed about the product by the Traffic Supervisor. He also saw truck advertisements in two publications, Physical Distribution and Handling and Shipping, commenting, "I look for all the new ideas in handling and shipping." He considered the Traffic Supervisor's information most valuable because he felt that, "He's most involved in the function and recommends the vehicle best-suited to our needs--he's in the position to know."

The Director of Manufacturing was primarily informed through his past experience with the supplier and from several publications: Traffic, (international ads), Distribution, (ads), Material Handling and Business. He was familiar with the previous truck through his knowledge of the truck drivers' personal experience. He considered the drivers' reports along with the information obtained from the Traffic Supervisor as being the most valuable to him.

The Buyer consulted the yellow pages of the telephone book and called in suppliers to provide literature pertaining to trucks they felt would be suitable to the company's needs. Thus, his source of information was both personal interviews and literature. He also knew something about this type of product from past experince as he had purchased trucks on previous occasions. The Traffic Supervisor also contributed to his store of information. Finally, the Buyer read Iron Age, Newsweek, and local newspapers.

The President relied upon those in the company for relevant information. He received a requisition from Director of Manufacturing containing information gathered by the Buyer •

Summary: Number Of Persons (Of Five Interviewed) Who Got Information From Following Sources:

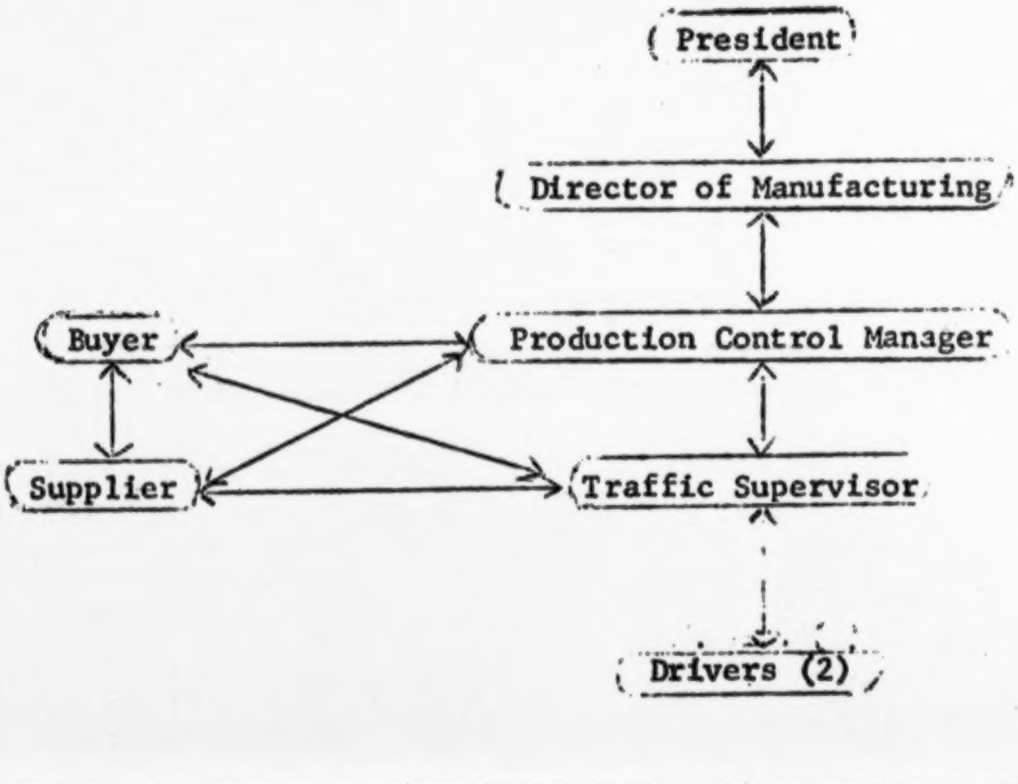
Others in the company	5
Called on by a salesman	3
Got direct mail from a supplier	1
Had previous experience with this type of product or supplier of it	3
Used standard reference work	1
Saw articles or ads in magazines	3
Total	16

VII. Satisfaction With Purchase Decision

All those interviewed at the company said that they had been "completely satisfied" with this purchase decision at the time it was made. The Traffic Sypervisor said he had been satisfied "because of the past history of our piece of equipment," a reason reiterated by the Director of Manufacturing. The Manager of Production Control thought that "an objective, logical decision had been made" while the Buyer felt that the company received the most for its money. The company President was satisfied, he said, becuase "I accept the work of responsible people."

All respondents felt that if the decision could be made over again, they would make the same decision. The truck purchased has proved satisfactory in all respects.

VIII. Overall Pattern Of Communication Concerning Purchase



Overall Summary Of Those Involved In Decision	
Top Management	1
Production	2
Services (traffic)	3
Purchasing	1
Total	7

IX. Supplier's Perception Of Purchase Decision

The salesman from the supplier company said that he had most contact with the Traffic Supervisor and the Production Control Manager, particularly the former.

Asked who he thought it was at the purchaser company who took part in the decision to buy a truck at this time, the supplier salesman mentioned only the Production Control Manager, who did in fact, have primary responsibility for this decision. The supplier salesman did not mention any of the other persons who had a role in this decision.

Asked who he thought decided to buy the product from his company, rather than from another supplier, the supplier salesman mentioned only the Traffic Supervisor, who did, in fact, have the greatest influence on the choice of the supplier. The supplier salesman did not mention a number of other persons who were prominently involved in the selection of a supplier--especially the drivers, the Buyer and the Production Control Manager (see above.)

Purchase Decision Study
Survey Research Center*
University of Michigan.

27. CASE STUDY: DECISION TO PURCHASE A PICK-UP TRUCK WITH SNOW-PLOWING BLADE

I. Purchaser

The purchaser is one of four divisions of a large midwestern corporation. This division manufactures a variety of types of printing presses as well as carton-making equipment. Purchasing is handled by the division itself, except for purchases over $50,000 (capital expenditures), which must be approved at a corporate level.

II. The Product Obtained

The product is a pick-up truck which is equipped with a snow-plowing blade. It will be used primarily by the Machine Shop for plowing snow in parking lots and storage yards. It may also be used as a pick-up truck for short-distance deliveries and for other uses not yet determined. Before the truck was purchased, a tractor with a snow-plowing blade, a rotary sweeper, and a snow bucket was used for snow removal.

III. How Need For Getting Product Came Up

The Plant Engineer, Plant Engineering Department, whose responsibility is to help purchase and maintain all types of equipment, said that the need for getting such a truck had been first brought to his attention by the President of the division and by the Superintendent of the Machine Shop. He added that "all the employees and supervisors noted the need for snow removal over many years...at least three years ago...The equipment was inadequate for large snow storms." The Product Plant Engineer, Plant Engineering Department (the Plant Engineer's assistant) mentioned August, 1965 (i.e. with Winter coming on soon) as the date when the need became acute. A specific recommendation for getting new snow removal equipment was made at this time by the Receiving Department Foreman, Machine Shop, whose responsibility is snow removal. He made his recommendation to the Product Plant Engineer, Plant Engineering Department.

Summary: Persons Involved In Discussion Of Need

Top Management: President	1
Manufacturing Superintendent; Receiving Department Foreman--both of Machine Shop	2
Service: Plant Engineer, Product Plant Engineer	2
Total	5

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* Interviewing for this study was conducted by the National Opinion Research Center

IV. Deciding To Get The Product

The Plant Engineer, Plant Engineering Department, tried to learn more about the type of snow removal equipment needed by speaking individually with the Manager of Manufacturing and with the Product Plant Engineer. The latter in turn discussed the need for new equipment with the Receiving Department Foreman, with the General Foreman, and with the Superintendent, all of the Machine Shop.

Although none of the respondents interviewed indicated that there were any differences of opinion about the desirability of purchasing new snow removal equipment, a representative from one of the two suppliers contacted believed that the Product Plant Engineer had to "sell" others in his company on making the purchase. The Supplier representative said that, "the Product Plant Engineer had to give the other people involved reasons for wanting to change [from the old snow removal equipment] telling them about the vehicle and suggesting that the old equipment could be traded in [to] reduce the purchase price."

The Plant Engineer, who was in favor of buying new equipment, influenced the others since, as the Product Plant Engineer expressed it, "he's responsible for purchases of this type of equipment." It was also he who made, with the approval of the Manager of Manufacturing, the decision to get the new equipment. Final approval for the purchase was given by the Controller, who approved the expenditure, and by the President of the division.

Summary Of Persons Involved In Decision To Get Product

Top Management: President	1
Manufacturing: Manager of Manufacturing; Superintendent, General Foreman, and Receiving Department Foreman--Machine Shop	4
Financial: Controller	1
Services: Plant Engineer, Product Plant Engineer	2
Total	8

V. Selecting A Specific Type Of Product And A Supplier

Although there were several potential suppliers of pick-up trucks available, only two such suppliers were seriously considered. The Product Plant Engineer indicates that a pick-up truck made by Supplier 1 was under consideration along with a smaller vehicle from Supplier 2.

The preliminary contacts with these suppliers were made by the Product Plant Engineer, Plant Engineering Department, who got information on the truck models and price quotations. A sales representative from Supplier 1 gave him brochures and also brought a pick-up truck to the company for a demonstration. Both the Plant Engineer and the Product Plant Engineer were present at the demonstration.

Both the Plant Engineer and the Product Plant Engineer consulted several others about the choice of a truck. The Plant Engineer consulted the Manager of Manufacturing and the Superintendent of the Machine Shop, Manufacturing Department, who was consulted about other uses for the truck. The Product Plant Engineer spoke to the Plant Engineer, to the Receiving Department Foreman, Machine Shop, and to the latter's superior, the Superintendent of the Machine Shop. It is the Receiving Department Foreman who will be using the pick-up truck for snow removal and for short deliveries.

There was some difference of opinion concerning whether to get a pick-up truck from Supplier 1 or a smaller vehicle from Supplier 2. The Product Plant Engineer states that some individuals felt that Supplier 2's vehicle ought to be purchased since it is "the best known and oldest" in its category. Also, the Receiving Department Foreman, Machine Shop, mentioned that he knew of someone (unspecified) who had had trouble with the type of pick-up truck manufactured by Supplier 1.

However, after further discussion agreement on Supplier 1 was reached. The Plant Engineer and the Product Plant Engineer felt that they had the greatest influence on this choice. The latter commented, "I was gathering all of the information and contacting all of [those] concerned." Several reasons were given for the choice made. The Plant Engineer lists "price, delivery, and ease of maintaining," while the Product Plant Engineer states, "First of all, we felt that the merits and available options on (Supplier 1's pick-up truck) were more suitable to our needs than those of (Supplier 2's). The secondary reason was that it could be used as a pick-up truck; the availability of service facilities was another factor."

After the choice of a truck had been made, the Plant Engineer drew up the requisition specifying the supplier and type of truck wanted. A purchase order made up on November 15, 1966 was signed by the Director of Purchasing, by the Manager of Manufacturing, by the Controller, and by the President of the Company.

Summary: Persons Involved In Choice Of Specific Truck

Top Management: President of Company	1
Manufacturing: Manager of Manufacturing; Superintendent, Machine Shop; Receiving Department Foreman, Machine Shop	3
Financial: Controller	1
Purchasing: Director of Purchasing	1
Service Personnel: Plant Engineer, Product Plant Engineer	2
Total	8

VI. Sources Of Information About Product And Suppliers

The Product Plant Engineer said that he had had previous experience with the two suppliers under consideration and that this was why they were being considered. He also checked the phone book to make sure that service facilities were conveniently located to the company. He felt that his most valuable source of information had been the manufacturing brochures brought by the sales representatives of the two suppliers.

The Plant Engineer stated that he had contacted several suppliers for price quotations and complete specification of various types of trucks. He also received information from such magazines as *American Machinist*, *Material Handling*, and *Production Engineering*. He felt that his most valuable source of information was the manufacturing specifications from the suppliers.

The Director of Purchasing received an appropriation request and a requisition from the Plant Engineer and the Product Plant Engineer. These were the only sources of information he mentioned and were what he considered the most valuable to him.

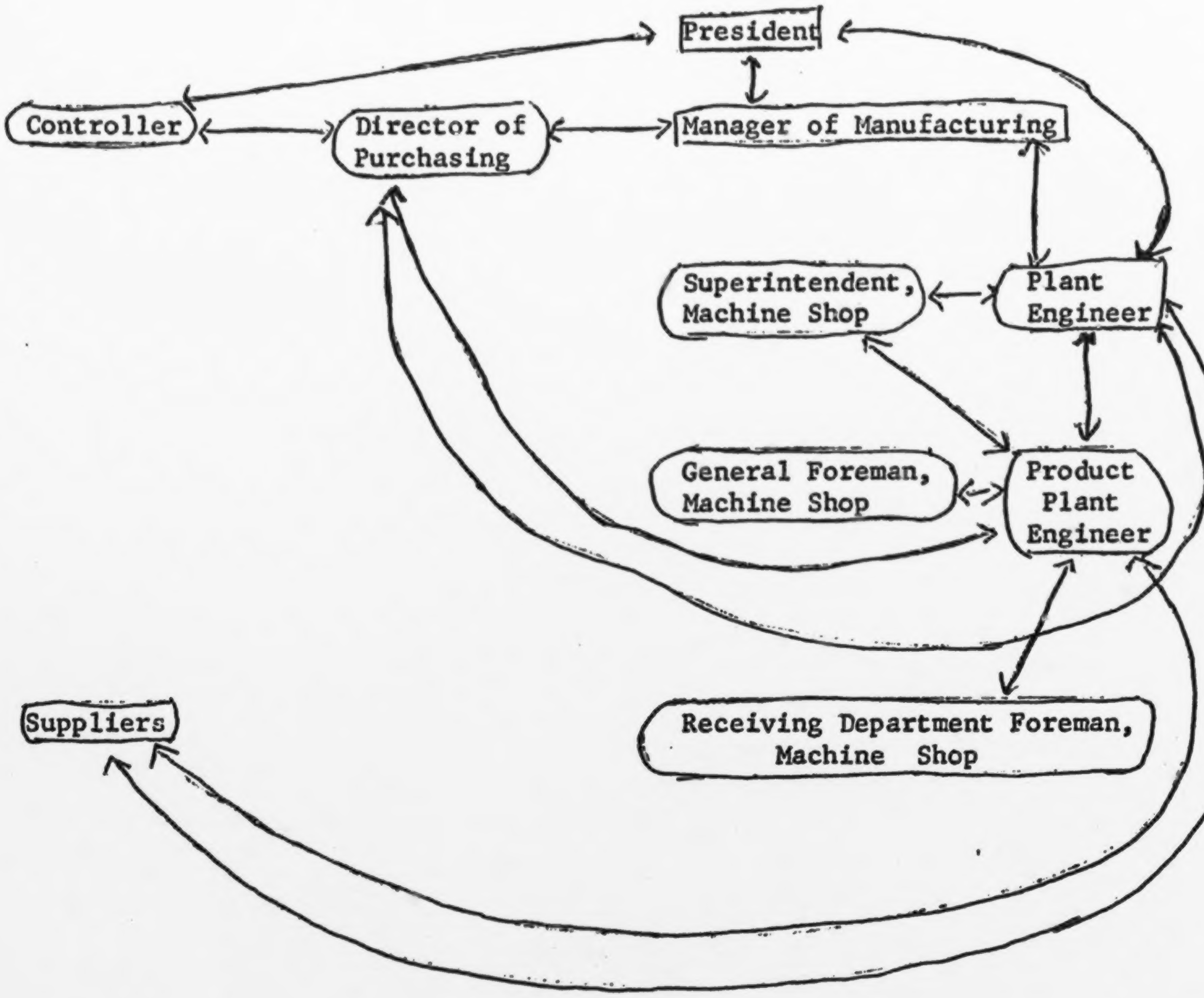
VII. Satisfaction With Purchase Decision

The Product Plant Engineer and the Plant Engineer both said they had been "completely satisfied" with the purchase decision at the time it was made because they felt it so adequately filled the company's needs. The Plant Engineer commented. "We generally purchase equipment from reliable companies." Likewise, when asked if they would be willing to make the same purchase again, both emphatically said "yes." The Purchasing Director declined comment on whether he would be in favor of making the same purchase again, noting that Purchasing was not involved in the actual choice of the product.

Overall Summary Of Persons Involved In Purchase

Top Management	1
Manufacturing	4
Financial	1
Purchasing	1
Services	2
Total	9

VIII. Overall Pattern Of Communications Concerning Purchase Decision



IX. Supplier's Perception Of Purchase Decision

The Sales Representative from the Supplier said that he had greatest contact with the Product Plant Engineer concerning this purchase. Asked who he thought took part in the decision to purchase this he mentioned only the Product Plant Engineer. He said also that he thought several other people in the company were involved in this decision--people whom he thought had to be "sold" by the Product Plant Engineer. However, he said "I don't know" who those other people are.

Asked who he thought decided to buy from his company rather than from another supplier, the supplier representative again mentioned only the Product Plant Engineer, adding "as far as I know."

He did not appear too sure either about how the purchaser company learned about his own company's products, saying "I would assume that it was through advertising and through a trade journal." He did seem knowledgeable about the reasons the Purchaser chose his product, on the basis of what the Product Plant Engineer told him. These reasons, as he saw them, were:

(1) His company's price quotations were lower.

(2) The other supplier being considered no longer made a particular model that the Purchaser was interested in.

(3) There is a parts and service center for his company's product close to the Purchaser company.

(4) "Possibly they like me although I had actually only been in contact with (Product Plant Engineer)".

Purchase Decision Study
Survey Research Center*
University of Michigan

28. CASE STUDY: DECISION TO LEASE FLEET OF "OVER-THE-ROAD" TRUCKS AND TRAILERS

The Purchaser

The purchaser is the Can Manufacturing Division of a large food products company. The company produces a wide variety of canned and frozen foods, including meats, fruits, vegetables and juices. The company is administratively divided into four geographical divisions, plus a nation-wide Can Manufacturing Division. Each division encompasses a number of plants and the division handles its own purchasing. Under administrative reorganization which followed the purchase studied here, a corporate official reporting to the Vice President for Operations has the responsibility of establishing procedures for purchasing in the various parts of the company. However, current plans call for delegating the actual responsibility for most purchases to a lower level than it was handled previously--i.e., to the individual plants.

The Products Obtained

Ten over-the-road trucks and ten trailers were leased for a period of four years. These trucks are used for hauling cans, case good, and supplies to both retail outlets and plants. Previous to this rental, trucks and trailers were leased from another supplier. Most of the new trucks leased are a different make than the trucks previously leased.

How Need Came Up

Consideration of getting new trucks began in August 1965, the division Purchasing Director said, when "we were slightly dissatisfied with (previous leasor's) servicing of the trucks." Dissatisfaction with service was felt, more specifically, by the Trucking Supervisor. The Trucking Supervisor was apparently influenced in this feeling by the reports coming to him from the ten drivers who drove these trucks. Moreover, the Purchasing Director said, "Since we have been operating these trucks, we have been contacted by a number of other leasing firms who expressed interest in handling our business."

Deciding to Get Trucks From Different Source

The Purchasing Director discussed the possibility of leasing trucks from another supplier with the Trucking Supervisor and with the Plant Manager of

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*Interviewing for the study was conducted by the National Opinion Research Center. Interviews were conducted with the Director of Purchasing in January 1967 and with the Vice-President of the supplier company in July 1967. At the purchaser company, the Trucking Supervisor, who was no longer with the company, and the Manager of City A Can Manufacturing Plant, could not be interviewed.

City A Can-Making Plant, to whom the Trucking Supervisor reports. "Everyone agreed that we should re-evaluate the thing," the Purchasing Director said. Explaining the reasons for this re-evaluation, he said, "The terms of the lease for one thing included a periodic re-evaluation and the problem encountered with (previous supplier) with respect to maintenance of units. We were primarily interested in price and maintenance." Asked which of these factors was most important, he said, "the price, although maintenance was almost as important." The Purchasing Director said that the decision to consider other suppliers was his responsibility, but that the Trucking Supervisor and the Plant Manager were quite influential in this decision.

Bids were asked from a number of truck suppliers, and about six bids were received. Two supplier companies--the previous supplier and a new supplier--were the low bidders and were most seriously considered. In addition to its low bid, the new supplier was seriously considered, the Purchasing Director said, "because (the Plant Manager) knew they had an excellent reputation even though they were smaller than some." Prior to sending out requests for formal bids, the Purchasing Director had discussed with the successful supplier's Vice President "our requirements with respect to the size of the loads we normally carry and the number of miles we normally run per year."

There were initially some differences of opinion concerning the choice among suppliers. The Plant Manager originally felt that one of the other supplier companies might have larger facilities for servicing. The differences of opinion were resolved, the Purchasing Director said, by "considering (new supplier's) reputation and bid. We just talked it over and agreed. I also contacted the people who are currently leasing trucks from these people and their comments were another factor in my decision." The Purchasing Director said that he had contacted three other companies. In each case he spoke to the one person who was "responsible for letting out the business." In one case, he recalled, this person was the Director of Purchasing; in another case the person contacted was the Traffic Supervisor.

Concerning the reasons for the choice of the new supplier, the Purchasing Director said, "Price and service were of equal importance and had equal consideration. (New supplier) had the lowest bid of any company that we were sure could give us first-rate maintenance."

The Purchasing Director did not at first mention the make of the trucks to be leased as a factor in the decision. However, when asked about this aspect, he commented, "The particular make that (new supplier) recommended was one that we had favorable experience with. Also, a couple of other bidders seemed to favor this truck. Therefore, we felt this was a good arrangement." He noted that the trucks leased to the company by the former supplier had included several makes, of which "a couple of units" were of the make which the new supplier would provide.

Asked who had the most influence on the choice of which particular trucks to get, the Purchasing Director named the Trucking Supervisor. "He was in direct contact with the problems of trucking. He was the acknowledged expert in the area," he said. Elsewhere the Purchasing Director stated "the final decision as to the supplier was mine. The decision as to the (type of) trucks is finally mine, but of course I relied on the judgment of (the Plant Manager) for that." Evidently, then,both the Trucking Supervisor and the Plant Manager exerted considerable influence on the decision, which was made finally by the Purchasing Director.

Before the deal was closed, the Purchasing Director discussed the matter with the Vice President of the Can Manufacturing Division and got his approval for the new leasing arrangement. A contract was signed on November 30, 1965. The Vice President of the division signed the contract for the purchaser company. The new trucks were made available on January 1, 1966.

Sources of Information

The Purchasing Director said that information was obtained from the competitive bids submitted by suppliers and from a file on trucking companies which he kept, based in part, evidently, on materials submitted by these companies over the years. He said also that his Purchasing Department checked the financial background of all companies before sending out bids. Also, as noted above, the Purchasing Director contacted other companies who had leased trucks from the successful supplier.

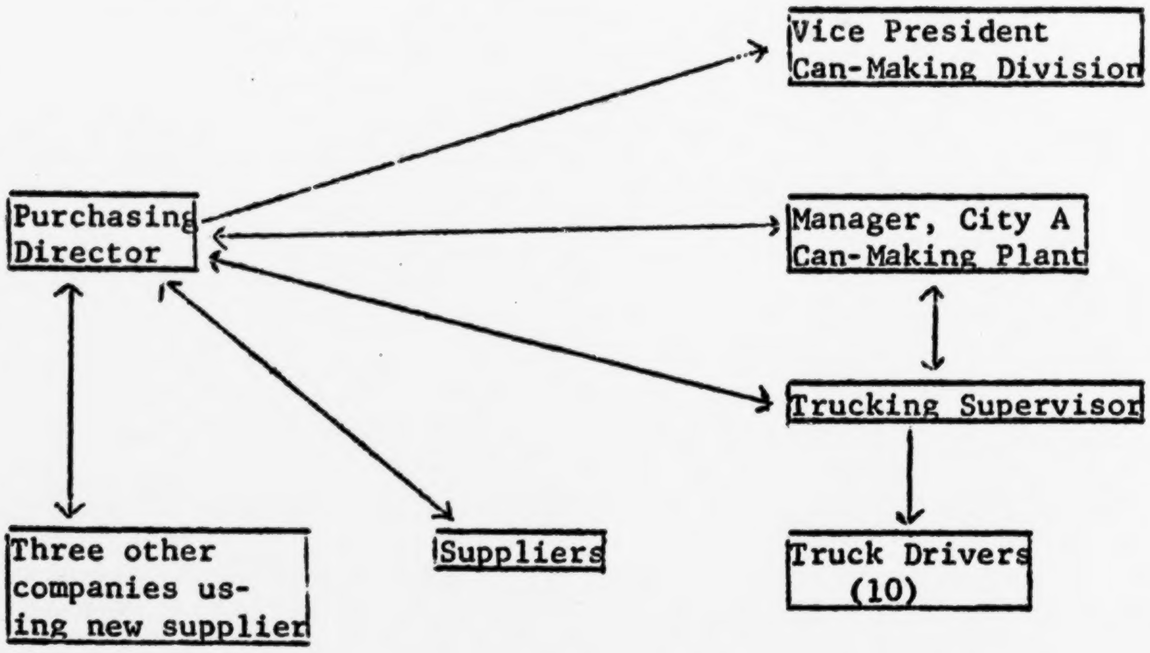
Satisfaction with Purchase Decision

The Purchasing Director said that he was "fairly satisfied" with the purchase decision at the time it was made. Explaining his lack of complete satisfaction, he said, "there was some small amount of doubt regarding their servicing capabilities. They did not have as extensive a servicing operation as some of the other companies called upon had. However, I felt that the fact that they were smaller (would make them) more anxious to increase their business and reputation by giving us their best." One year later, at the time of the interview, he felt that, if the decision could be made over, he would favor making the same decision. "It has worked out very well. The service has been everything we hoped for," he said.

Summary of Persons Involved in Purchase (As Known to Purchasing Director)

Top Management:	Vice President, Can-Making Division	1
Production:	Manager, City A Can-Making Plant	1
Services:	Trucking Supervisor; Ten drivers	11
Purchasing:	Purchasing Director	1
Other:	Persons at other companies using new supplier	3
	Total	17

Overall Pattern of Communications Concerning Purchase (As Known to Purchasing Director)



Supplier's Perception of Purchase Decision

At the supplier company, the Vice President was the only person involved in this leasing. He described his responsibilities as "just about everything--service, contracts, everything that takes place here, I have a part in." In the case of this leasing, he said he had contact only with the Purchasing Director (whom he thought, incorrectly, was Vice President or General Manager).

Asked who he thought it was at the purchaser company who took part in the decision to lease the trucks at this time, he mentioned the Plant Manager, the Vice President of the Can-Making Division, and the Purchasing Director. (The only person prominantly involved in this decision but not mentioned by him is the Trucking Supervisor.)

Asked how he thought the people in the purchaser company knew about his own company, he replied, "I contacted them. I'd heard through another company that they were not satisfied with the company they were leasing from and I called on them to explain we sold leases and they liked our deal."

Asked who he thought decided to lease from his company, rather than from another supplier, the supplier Vice President named the Vice President of the Can-Making Division. (According to the Purchasing Agent, although the division Vice President gave formal approval, the actual choice was made by himself, the Plant Manager, and the Trucking Supervisor.)

With regard to the reasons why the purchaser company chose his own company, the supplier Vice President commented, "the company they were leasing with would not give them service and our deal was with service and, of course, our price was within reason."

29. CASE STUDY: DECISION TO PURCHASE A PICK-UP TRUCK

I. Purchaser

The purchaser is one division of a large, nation-wide corporation which makes over seventy finished and unfinished products in plants spread out across the country. This division manufactures mainly farm implements and is the "mainstay of the company".

Each division of the corporation is autonomous in its purchasing. This division employs eleven persons in its Purchasing Department. It handles all divisional purchasing; none is done at the corporate level.

III Product Obtained

The product obtained is a 3/4 ton, pick-up truck to be operated by the Maintenance section of the Engineering Department. The truck is used for the pick up of heavy equipment and parts and for miscellaneous errands. It was purchased to replace another similar vehicle which was approximately four years old. The division as a whole has about four trucks.

III. How Need for Getting Product Came Up

In about November 1965, the Maintenance Superintendent, Engineering Department, who is responsible for the truck, became aware of problems with the old truck.. These problems included breakdowns and high cost of upkeep. (Since the truck has a regular driver, it seems likely that the Maintenance Superintendent got some of his information about the truck's condition from the truck driver, although this is not mentioned by persons interviewed.)

The problems with the old truck occurred in the context of a policy of purchasing a new truck about every four years. As the Plant Engineer (the Maintenance Superintendent's Superior) explained it, "The truck has a number in the files and a close tab on expenses is kept. At four years we check it out."

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*Interviewing for this study was conducted by the National Opinion Research Center, University of Chicago. Interviews concerning this purchase were conducted in January 1967 with the Purchasing Agent; the Plant Engineer; the Vice-President for Engineering; and the Director of Manufacturing, as well as with a representative of the supplier. The Maintenance Superintendent could not be reached for interviewing.

IV. Deciding to Get a New Truck

After becoming aware of the poor condition of the old truck, the Maintenance Superintendent brought the matter to the attention of his superior, the Plant Engineer. The Plant Engineer checked the records on the truck, especially with respect to costs, and agreed that a replacement was warranted. The Plant Engineer was attributed greatest influence on this decision by one respondent (the Director of Manufacturing) because of his responsibility for these records. "He has maintenance statistics available to him and the economy of the replacement would be entirely in his hands," the Director of Manufacturing said. The Plant Engineer said, however, that the Maintenance Superintendent "has to live with the equipment and his recommendation is law."

The Purchasing Agent also attributed the greatest influence on the decision to get a new truck to the Maintenance Superintendent, saying, "It's in his budget and he's the one that benefits most by it."

In addition to his talks with the Plant Engineer, the Maintenance Superintendent also mentioned the matter to several other responsible persons in early 1966. One was the Purchasing Agent, who said that he "urged" the purchase. "I knew the condition of the other one... I personally think that they should be traded every third year," the Purchasing Agent said. The Maintenance Superintendent also mentioned the matter (evidently informally because they are not directly linked in the organization) to the Director of Manufacturing, advising him, the Director of Manufacturing said, "on the maintenance cost of the old truck."

The next formal step toward the purchase was taken by the Plant Engineer, who, in his words,"developed the justification". However, this justification was not seen as a difficult obstacle by the Plant Engineer who commented in answer to a question about possible differences of opinion about making the purchase, "It's between (Maintenance Superintendent) and myself and all we have to show is use in Maintenance."

In January 1966, the Plant Engineer sent a justification for the purchase and request for the necessary appropriation to the Vice-President for Engineering. Though several other respondents indicated that his approval was largely a formality, saying that, as head of the Engineering Department, "The decision is made by me." I would have to put it through." The appropriation request also required approval from the Divisional Cost Accountant and from the Director of Manufacturing. Though the approval of these men was seen by some others as a formality, before giving his approval, the Director of Manufacturing discussed the matter with the Plant Engineer, with the Director of Purchases, and he said, "maybe" with the Production Control Manager, Manufacturing Department. Finally, the approval of the division President was obtained.

V. Choice of Supplier

The Plant Engineer thought that three makes of truck--A,B, and C--had been considered for this purchase. The Director of Manufacturing said that he "assumed" that Makes A, B ,C, and"possibly" D had been considered. He also said that he had suggested to the Purchasing Department that they "request bids from companies we might do business with in the interest of trade relations... if price, delivery, and quality were the same on all bids, (the business partner) would get preference."

It was the Purchasing Agent who had the responsibility for contacting possible suppliers of the new truck. He said that two makes--A and B--were considered. The company, he said, had "once"purchased Make A trucks but their "experience with the last one was poor." He indicated that the maintenance cost of Make A had been high.

According to the Plant Engineer, price quotations were obtained from three truck dealers. However, the Purchasing Agent appears to have considered seriously only one, Make B, and only one dealer. With respect to Make B, he said, "We went to (Make B) because we've had the best experience." With respect to the dealer with whom the company had dealt before, he said, "We go to (Dealer X),.. You can go to any number of dealers with less than $50 difference in price. So you go where you can get good service (Dealer X) is right in our area and dependable. I have known him for 40 years. He's one of the oldest dealers around. Over the years we've checked with various dealers and found we couldn't do better." He said also that Dealer X had given a"better price," but repeated that the most important consideration was "their good service in the past."

The Purchasing Agent said that after he "picked" the supplier, the Maintenance Superintendent agreed with this choice. The Purchasing Agent said that both of them were influential in the choice--the Maintenance Superintendent because "he uses it" and himself "because I'm responsible", If it came to a standoff, it would be my decision". the Purchasing Agent said. (However, both the Plant Engineer and the Vice President for Engineering named the Maintenance Superintendent as most influential in the choice of the supplier. "He has to live with it," the Plant Engineer said. According to the Plant Engineer the role of Purchasing is primarily to get proposals from several suppliers. "They are neutral--they just get proposals," he said.

The Plant Engineer was himself named by the Director of Manufacturing as most influential in the choice of supplier. He "is the most knowledgeable where it concerns the quality of the product," the Director of Manufacturing said. The Plant Engineer, while minimizing his role in the purchase, did note that he "compared models." He commented at one point, however, that "Any truck will do in this case."

The purchase order for the new truck was signed by the Purchasing Agent on February 1, 1966 and the truck was delivered in March 1966.

VI. Sources of Information about Product and Suppliers

Asked about ways in which he got information about trucks or about suppliers of trucks, the Purchasing Agent referred to his past experience with Dealer X from whom the new truck was purchased. He said his most valuable source of information was the company's experience with Make A (which had proved unsatisfactory) and with Make B, with which "we've had the best experience."

The Plant Engineer said that he got information from the Purchasing Department. "They are responsible for contacting the people and getting proposals to the specs we set up," he said. "The reason is the Purchasing Department is equipped to handle these people so we will not be bothered by salesmen." He mentioned specifically getting price and delivery information from the Purchasing Agent. He said that he had not seen any relevant articles or advertisements in any publications.

The Vice-President, Engineering, asked about ways in which he got relevant information, said only "That would go to Purchasing, which would request quotations and competitive bids." He said he had not gotten any information or ideas from people outside the company and that he had seen no relevant articles or advertisements in any publications. Nor, he said, had he gotten information about the product or suppliers from people in the company. "That's all handled elsewhere," he said.

The Director of Manufacturing noted that the Plant Engineer had supplied "aggregate maintenance costs for the existing equipment, by formula" and that the Purchasing Department was requested to obtain bids. He said that his most valuable information was "the descriptive bid information or ideas from people outside the company and did not see relevant articles or advertisements in any publications.

VII. Satisfaction With Purchase Decision

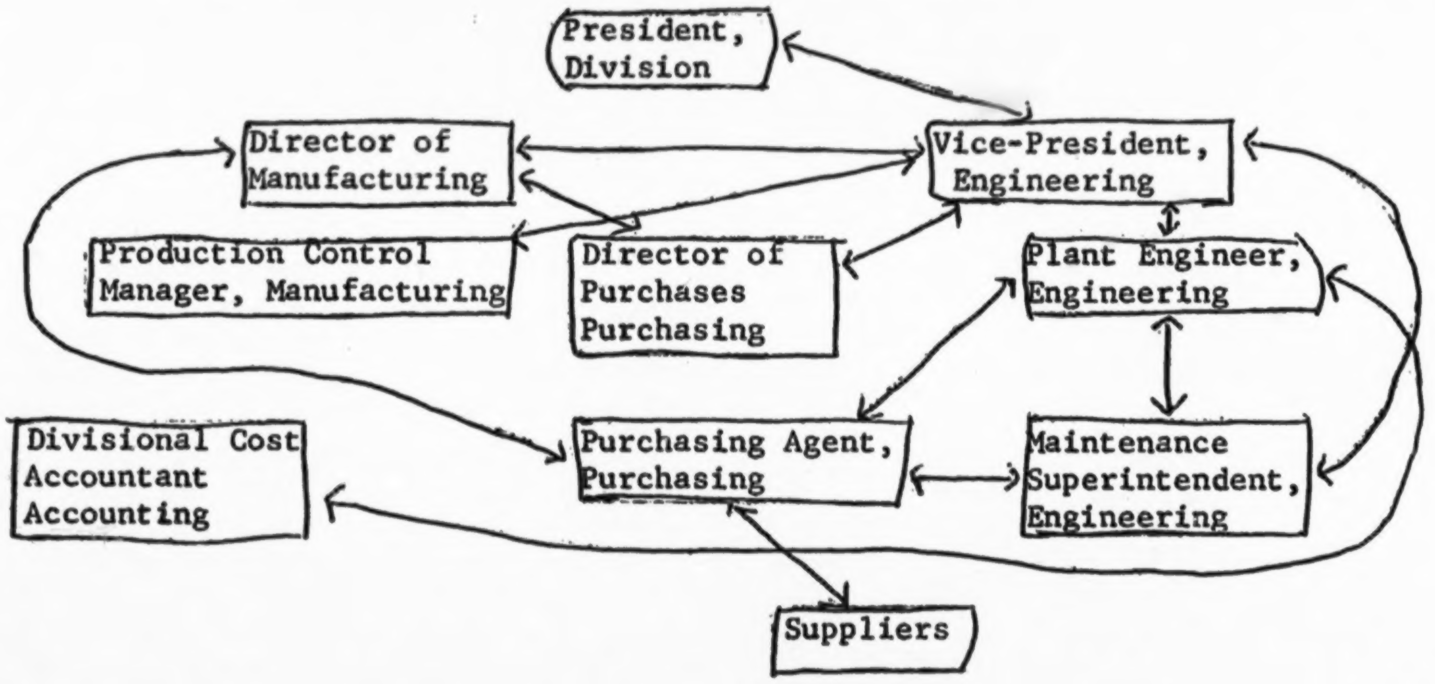
All four respondents said that they had been "completely satisfied with the decision at the time it was made." The two higher management men --the Vice-President, Engineering and the Director of Manufacturing--said that they were satisfied because they have confidence in those that made the decision. The Purchasing Agent declared, "I believe we were getting the best product at the most advantageous cost." The Plant Engineer noted only, "It does the job."

When asked if they would make the same purchase again, all four respondents answered "yes." The Director of Manufacturing commented "The equipment to my knowledge has been satisfactory and measures up to the vendor's qualifications."

VIII. Summary of Persons Mentioned as Involved in Purchase

Top Management:	President; Vice-President, Engineering	2
Engineering:	Plant Engineer; Maintenance Superintendent	2
Manufacturing:	Director of Manufacturing; Production Control Manager*	
Purchasing:	Director of Purchases; Purchasing Agent	2
Accounting:	Divisional Cost Accountant	1
	Total	9

IX. Pattern of Communications Concerning Purchase**


President, Division
Director of Manufacturing
Vice-President, Engineering
Production Control Manager, Manufacturing
Director of Purchases Purchasing
Plant Engineer, Engineering
Divisional Cost Accountant Accounting
Purchasing Agent, Purchasing
Maintenance Superintendent, Engineering
Suppliers

*Probably discussed subject with Director of Manufacturing

** The communication between the Director of Manufacturing and the Production Control Manager is not certain. The former says that "maybe" he spoke to the latter.

X. Supplier's Perception of Purchase Decision

The Sales Manager of the truck dealer, who said he "sold the unit myself" and "had sold several units in past years", also said that his contact concerning this sale was with the Purchasing Agent. "I was called to submit a bid, " he said. Asked who he thought took part in the decision to buy a truck at this time, he mentioned the Purchasing Agent and the Maintenance Superintendent. He thought that it was the Maintenance Superintendent who decided to buy from his company rather than from another supplier. "He had bought (Make A) and was dissatisfied," the Sales Manager said. He stated that "through previous sales they have been sold on our services... They bought here before I came, prior to 1958...We are the closest to them. They are sold on (Make B)." The Sales Manager added, perhaps only partly in jest "And because of me... I'm a nice guy."

Purchase Decision Study
Survey Research Center*
University of Michigan

30. CASE STUDY: DECISION TO PURCHASE A LIFT-TRUCK

I. The Purchaser

The purchaser is a midwestern-based company with a number of plants in different parts of the country. It produces a variety of musical instruments, including pianos, organs, string instruments, and band instruments. In the corporate offices, which handled the purchase studied, there is no purchasing department as such. Most purchasing at the corporate level is handled by the Assistant Secretary who acts as Purchasing Agent on all major purchases.

II. The Product Obtained

The product obtained is a battery-operated fork lift truck used in a warehouse in the city where the corporate headquarters are located. The truck lifts crates to the desired height and then stacks them. It turns in a small radius, permitting the aisles to be narrow and thus allowing more stacking space. It also loads an entire pallet (platform) at one time.

The company had purchased a similar lift-truck from the same supplier about three years previously but that lift-truck was being used elsewhere. The work which the newest machine does was done previously by a less efficient lift-truck which was hand-loaded and which could not stack material as high as the new one.

III. How the Need Came Up

The Warehouse Manager, Warehouse and Shipping, said that the need for getting the fork-lift truck arose "when we went to the use of pallets. You can load many boxes on a pallet at once and raise them to any height for stacking up to the ceiling limit." However, the old lift-trucks could not handle the pallets effectively. "The hand-loading type of truck didn't go high enough and didn't stack high enough," the Warehouse Manager said. He recalled first becoming aware of the need in late 1964--i.e., about one and a half years prior to the purchase.

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* Interviewing was conducted by the National Opinion Research Center, University of Chicago. The Warehouse Manager and the Assistant Secretary of the Corporation, as well as a sales representative of the supplier, were interviewed in January, 1967.

IV. Deciding to Get the Product

The Warehouse Manager discussed the need for a lift-truck with his assistant and with the Maintenance Superintendent. "We decided to ask that it be bought," the Warehouse Manager said and he made this recommendation to the Assistant Secretary of the corporation, in the latter's capacity as purchasing agent. (The Assistant Secretary's responsibilities also include issuing company stock and handling tax, insurance, and real estate matters.) According to the Assistant Secretary, the matter came to his attention about one year prior to the purchase.

The Assistant Secretary agreed that, as long as the hand-loaded lift-truck was being used, "the efficiency of the (warehouse) operation was lacking." He felt that "automation would be the answer." The decision about whether or not to make such a purchase was in the hands of the Assistant Secretary, both he and the Warehouse Manager agreed. "This is my job and I have the final say," the Assistant Secretary said. Despite the fact that the purchase cost approximately $6,000, no other approvals were necessary.

V. Choosing A Supplier

The Warehouse Manager discussed the choice of a particular type of lift-truck with his assistant and with the Maintenance Superintendent. He said that, although they liked the advanced lift-truck they already had (not the one being replaced), "we looked around to see if anything new was on the market."

The Warehouse Manager said that he "surveyed different suppliers. "We went to them and looked at three or four different makes." The Warehouse Manager, accompanied by the Maintenance Superintendent on at least one occasion, also saw demonstrations of the machines in operation. However, the Warehouse Manager did not recall the names of any suppliers considered, aside from the successful supplier--indicating, perhaps, that he didn't consider other suppliers very seriously.

The Warehouse Supervisor said that he "had the specifications in mind and looked for a narrow turning vehicle." He discussed the alternatives with his assistant and with the Maintenance Superintendent, both of whom, he said, had little directly to do with the purchase but served as "sounding boards".

The Assistant Secretary of the corporation also investigated possible suppliers. He said that he "called in well-known manufacturers for information." He had personal contact several times with a salesman from the successful supplier (Supplier A). The Assistant Secretary arranged for getting the use of a lift-truck from Supplier A on a trial basis. The machine was used on a trial basis for about six weeks, the Assistant Secretary said.

The Warehouse Manager felt that the lift-truck of Supplier A, the same product the company had purchased several years earlier, best suited their needs. "We needed aisle space and the radius of turn on the (Supplier A) machine was smallest," he said. "Having one we liked already...and finding nothing new on the market we got another of the same," he added.

The Warehouse Manager recommended Supplier A to the Assistant Secretary, who agreed with this choice. As to why Supplier A was chosen over others, the Assistant Secretary did not refer to the radius of turn stressed by the Warehouse Manager but mentioned that this supplier's sales department "gave us the best service in getting us the demonstrator."

The Warehouse Manager felt that he had the greatest influence in the choice of a particular type of lift-truck, saying "this is my department and I know it's needs." However, the Assistant Secretary, evidently thinking in terms of the final authority, saw himself as having greatest influence on the choice of type of product and supplier. "It was my decision on both counts," he said.

The decision process outlined above, while not complex, took place over the period from the Spring of 1965 to the end of May 1966. "It took us about a year to make our minds up on this," the Assistant Secretary said. A new fork lift truck was ordered on about June 1, 1966 and delivered several days later.

VI. Sources of Information

Asked about the ways in which he got information about this product or about suppliers, the Warehouse Manager mentioned his visits to suppliers. He said that he did not get any information or ideas from people outside the company and did not see any relevant articles or advertisements in any publications. His most valuable source of information, he said, was when he "saw it myself," i.e., saw the machine at the successful supplier. He commented later, "I knew what we needed to fill the job and I found the machine to do it."

The Assistant Secretary of the Corporation said that his information about this product and suppliers came "through past experience seeing trucks in operation in other locations" and through his calls to "well-known" manufacturers for information on their products. Like the Warehouse Manager he too said that he had not obtained any information or ideas from anyone outside the company, excepting suppliers, and that he had seen no relevent articles or advertisements in any publications. His most valuable source of information, the Assistant Secretary said, was the "actual proposal prepared by the (successful) salesman."

VII. Satisfaction with Purchase

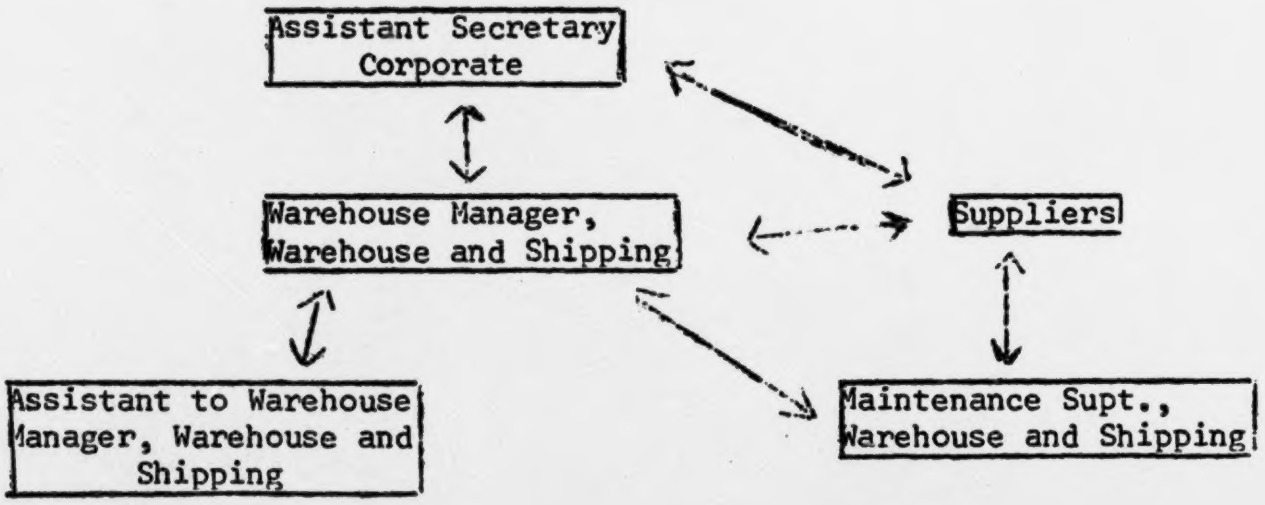
Both the Warehouse Manager and the Assistant Secretary said that they had been completely satisfied with the purchase decision at the time it was made. "It was just the item we needed," the Warehouse Manager said, noting again that it met the specifications he had in mind for a narrow-turning vehicle. "It also was battery-operated and lifted high enough and carried a goodly load," he said.

Both men said also that, if the decision could be made over again, they would be in favor of making the same purchase again. "We subsequently have bought a second one--we're very satisfied," the Assistant Secretary said.

VIII. Summary of Persons Mentioned As Involved in Purchase

Financial:	Assistant Secretary	1
Service Personnel (Warehouse):	Warehouse Manager, Assistant to Warehouse Manager, Maintenance Superintendent	3
	Total	4

IX. Pattern of Communications Concerning Purchase


Assistant Secretary Corporate
Warehouse Manager, Warehouse and Shipping
Suppliers
Assistant to Warehouse Manager, Warehouse and Shipping
Maintenance Supt., Warehouse and Shipping

X. Perception By Supplier of Purchase Decision

The sales representative at the supplier company, who was the person involved in this sale, said that he had contact with the Warehouse Manager whom, he said, is a "personal friend." "He needed a truck and called to ask about a rental. I suggested the alternative of buying a new truck," the sales representative said. The problem was we had a truck but no power for it." He continued, "we solved that by using the battery and charger from his old truck and installing it in the new one."

Asked who he thought took part in the purchaser's decision to buy a new truck at this time, he named the President of the Company, the Warehouse Manager, and "maybe" the Assistant Secretary. Regarding the latter he said, "He may have been called for an okay to buy--I'm not sure." (Those at the company did not mention any involvement by the President but made it clear that the Assistant Secretary had an important part in the decision to buy.)

The supplier salesman said that the purchaser company knew about his company because "(The Warehouse Manager) is a friend and had bought from us before--so he called me because he's a satisfied customer." He thought that it was the Warehouse Manager who decided to buy from his company rather than from another supplier. The reasons for this choice, the salesman believed, were that "we had the merchandise at the right time and price and delivery. We can service our products well and any time."

Purchase Decision Study
Survey Research Center*
University of Michigan

31. CASE STUDY: DECISION TO HAVE A PLANT ROOF REPAIRED

I. Purchaser

The purchaser is the main division of a company which is primarily a designer and manufacturer of high quality organs and pianos. This division produces a large number of organ models and has several plants within the same city. The Purchasing Department of the main division, where this study was done, employs eighteen persons. The division is completely responsible for its own purchasing.

II. The Purchase

The expenditure was made for a re-roofing of a portion of the roof of the company's plants. The roof had started to leak and water coming through was damaging materials in a stockroom. The material used for the repair was an asphalt-roll roofing and asphalt black-jack cement, along with pea pebble. Before this repair was done the company's maintenance department had used cold roofing applications. But the roof, at this point, was damaged more extensively and in need of immediate repair. The area of the roof being re-done was 4500 square feet.

III. How Need For Making Purchase Came Up

The need for roof repair at the particular plant had been known since about the beginning of 1966. The Assistant Treasurer recalled that the General Maintenance Supervisor had brought the need to his attention about three to six months prior to the time the job was done.

On May 2, 1966 before the need had been acted upon, the Maintenance Foreman notified the General Maintenance Supervisor that the roof was leaking and causing damage to the stock.. This created aneed to have the repair done quickly by an outside contractor. As the General Maintenance Supervisor explained, "Because of [the] emergency nature it was let out to contract, otherwise Maintenance might have done it."

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*Interviewing for this study was conducted by the National Opinion Research Center. Interviews for this case were conducted with the General Maintenance Superintendent, the Director of Manufacturing, the Buyer, the Assistant Treasurer, and the President.

IV. Deciding To Make The Purchase

Having been notified about the leakage in the roof, the General Maintenance Supervisor sent a requisition to the Director of Manufacturing on the same day. As the Buyer described the role of the Director of Manufacturing, "he is [the] primary clearing house where capital expense is OK'ed because he's the intermediary between manufacturing and management." After discussing the problem with the General Maintenance Supervisor, the Director of Manufacturing approved the requisition and sent it on to the Assistant Treasurer.

It is the Assistant Treasurer's responsibility to check the requisition and to approve the budget expense. He must sign all checks under $500 and cosign all those over $500. The Assistant Treasurer explained that, "[The purchaser company] generally has a policy of giving people an awful lot of rope and that's the case with [the General Maintenance Superivosr.] He's been'maintenance' around here for a long while, proved himself to be an efficient operator, so at the beginning of [the] year, funds are allocated to him and we know the money is well spent."

Of decision-making in general, the Assistant Treasurer added, "Most old timers have pretty much free rein in decisions, much more freedom of movement. Top management makes decision on general ways [i.e., procedures], and expects people in charge to do a good job, and their recommendations are generally accepted."

Such seemed to be the case with the decision to have the roof repaired. Because it was the General Maintenance Supervisor's responsibility to care for all building maintenance he would be, as the Buyer explained, "the individual responsible for OK'ing the job and ultimately the invoice" and had the most influence on the decision. After the requisition had been cleared with theDirector of Manufacturing and the signitures of the Assistant Treasurer and of the Treasurer had been obtained, the President's approval was necessary, as the purchase was a capital expenditure. As the President explained, "All capital purchases must come to this office for authorization. As a matter of fact, certain capital expenditures under some amount--let us say $500, arbitrarily--are routinely approved or submitted by the division head. If they are over $500 they are more thoroughly examined for economic expenditure. Then a more active part is played here."

V. Selecting A Contractor

Only two contractors were considered. One was not considered very seriously apparently, as only one of the five respondents suggested that it was a possible choice. All of the respondents were unanimously agreed upon a particular contractor as the most desirable choice.

The General Maintenance Supervisor had most responsibility for determining what kind of roofing materials to use and from what contractor. As the Assistant Treasurer explained, "...the decision on maintenance would be within [the General Maintenance Supervisor's] realm. He would only need... two or three bids from reputable contractors."

After having his requisition approved, the General Maintenance Supervisor asked a Buyer from Purchasing to "get in touch with [several] qualified contractors." The General Maintenance Superintendent also suggested to the Buyer several contractors who could be contacted. The Buyer helped clarify this process, commenting, "In a case such as this, Purchasing has, or should have, the option of making the decision between varying prices representing various qualities of work. What I mean [is this]: asphalt sells for X number of dollars, gravel also. Roofs are under the minimum wage scale, so basically the problem is dealing with the profit margin. So Purchasing must evaluate the differences in price and the possible differences in quality. This was done with advisement from [the General Maintenance Supervisor.]"

The Buyer obtained bids from two contractors and showed them to the General Maintenance Supervisor. The bids were then sent to the Director of Manufacturing for evaluation. As he put it, "I would be inclined to evaluate the bids on the basis of reputation, past performance, in addition to close bid. I would accept reputation as important."

However, the Director of Manufacturing, the Buyer and the General Maintenance Supervisor all agreed that it was the General Maintenance Supervisor who had most influence on the choice of a particular kind of roofing job and contractor. As the General Maintenance Supervisor explained it, "It's my job to maintain the building. I have to justify my decision, of course, to [Director of Manufacturing]."

In reference to the selection of the supplier, the General Maintenance Supervisor said, "If we have satisfactory service from someone, we always consider him. In an emergency nature we pick someone we have confidnce in." The Assistant Treasurer expressed similar feelings when he commented, "We've done business with [the successful supplier] for years. Once an outfit does a competent job, he can expect more from us if he's within reason on price." To this, the Buyer added that the purchaser had confidence in the contractor's workmanship, that the contractor guaranteed their work, and also that their price was reasonable.

The purchase order was issued on May 9, 1966 and the job was completed in the same month.

VI. Sources Of Information About Product And Suppliers

The General Maintenance Superintendent received information in this particular instance from the Maintenance Foreman who reported the leaking roof to him, In general, the Superintendent relies on past satisfactory service from suppliers to guide him in choosing a particular supplier for a job. He felt that the "good work performance...in the past" of the successful contractor was his most valuable source of information. He noted also the bids obtained through Purchasing as a source of information.

The Director of Manufacturing received his information from the General Maintenance Superintendent. He said he had seen relevant materials in such publications as maintenance magazines and manufacturing periodicals and, more specifically, Business Week and Factory. As examples of the kinds of things he had seen in such publications, he mentioned "whether roofs should be white or black, coefficients of expansion."

The Director of Manufacturing noted that he had been plant superintendent and that he "became very familiar with all such areas." He said that such "personal experience in maintenance...the success and failures I've enjoyed" was his most valuable source of information in this case.

The Buyer said that his most valuable source of information concerning the purchase was the General Maintenance Superintendent, from whom he received information about "which contractors to invite, primarily based on his past experience with them." He also consulted the yellow pages of the telephone directory for listings of roofing contractors.

The buyer indicated that the bids from contractors provided additional information: "What grade of gravel, how much tar, what weight of tar, to be spread via what method."

The Assistant Treasurer said his most valuable sources of information were his knowledge of the "past performance" of the successful contractor and the recommendation of the General Maintenance Supervisor.

The President of the company indicated as his source of information concerning this purchase only "the opinions of the gentlemen[in the company] involved."

VII. Satisfaction with Purchase Decision

All four respondents said that they had been completely satisfied with the decision at the time it was made. Several persons mentioned as reasons the reputation of the contractor and the good work they had done for the company in the past. The Buyer mentioned also feeling satisfied "because the bid was competitive."

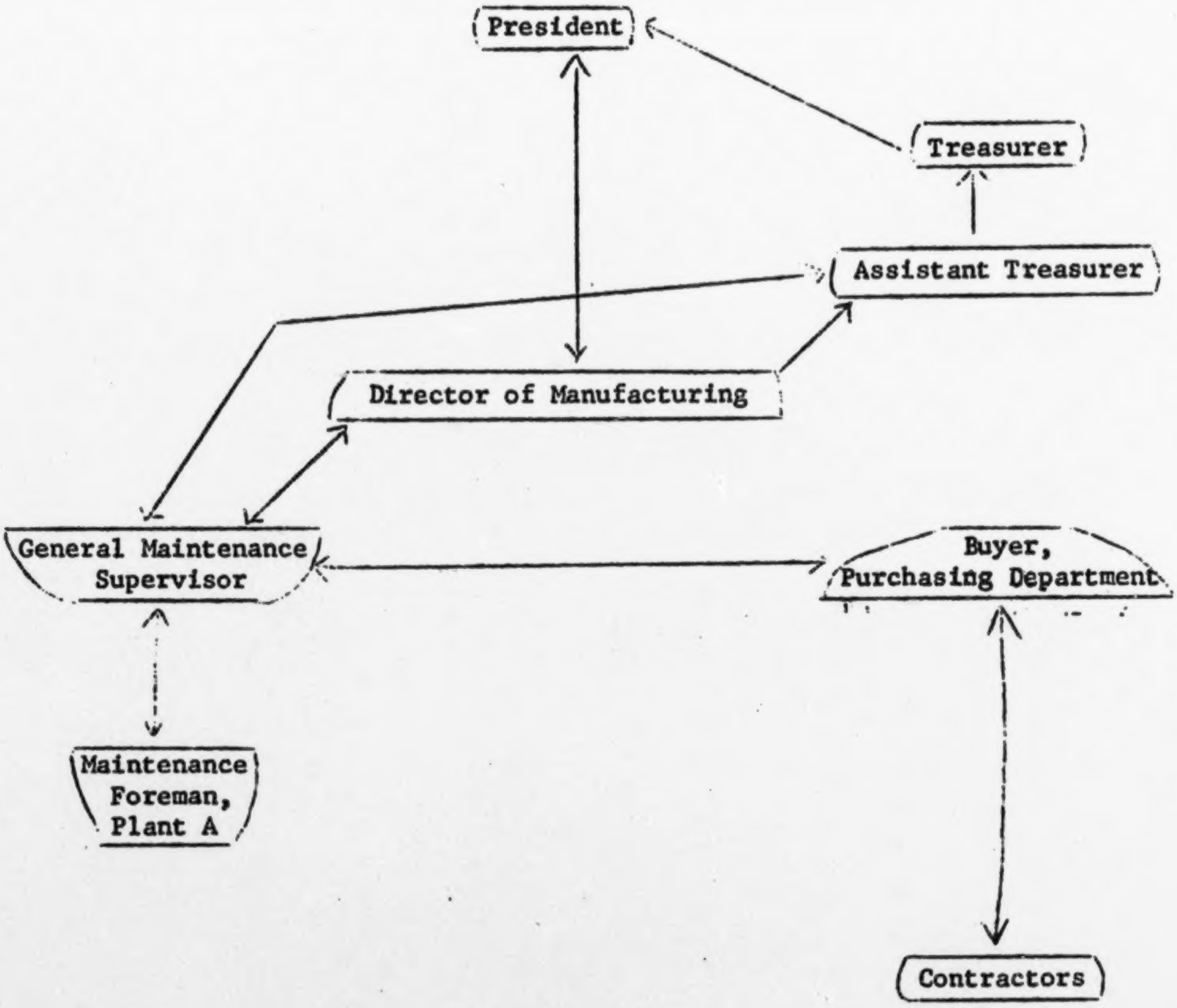
All respondents said they would made the same decision again, if given the chance, because the re-roofing job had proven completely satisfactory.

It may be noted, however, that at one point during the interview, with the General Maintenance Superintendent, the interviewer noted that he "began to question the re-roofing...because due to the blizzard which had just occurred, the roof had fallen in at [another plant of this company]."

VIII. Summary Of Persons Mentioned As Involved In Purchase

Top Management: President, Treasurer	2
Manufacturing: Director of Manufacturing	1
Financial: Assistant Treasurer	1
Services: General Maintanence Supervisor; Maintanence Foreman	2
Purchasing: Buyer	1
Total	7

IX. Overall PatternOf Communication Concerning Purchase


President
Treasurer
Assistant Treasurer
Director of Manufacturing
General Maintenance Supervisor
Buyer, Purchasing Department
Maintenance Foreman, Plant A
Contractors

X. Interview With Contractor

The Office Manager - Accountant at the contractor company said that the Vice-President of the company is the person who deals with the [purchaser company] account. The Vice-President was on a prolonged vacation and could not be interviewed. The Office Manager, a woman, said that their firm had been doing work for the purchaser company for about five to ten years. She thought that their firm had been chosen "probably because we've done so much work for them."

32. CASE STUDY: DECISION TO PURCHASE HEATING EQUIPMENT FOR PLANT EXPANSION

I. Purchaser

The purchaser is a subsidiary of a large international corporation which has several subsidiary divisions with plants in both the U.S. and Canada. This particular subsidiary division manufactures steel castings and forgings in four plants to meet railroad and industrial needs.

The company purchasing department, which employs thirteen persons, clears all company purchases--although the actual decision to purchase is made by the Works Manager at the plant level.

II. The Purchase Decision

The decision in question was that of buying and installing a heating facility for a new addition to an existing plant office building. The purchase made was a combination heating and air-conditioning system (hot and cool air) which was compatible with the existing heating system and allowed separate temperature control in each room. The major equipment is mounted under the windows in each room and ducts run across the base of that wall.

III. How The Decision Was Made

For some time, according to the plant Superintendent of Engineering, the company had been "cramped for space" because of the employment of additional personnel. In early 1966, divisional approval was obtained to build an additional 2200 square feet of office space on to an existing plant office building, as had been requested by the plant's Works Manager. The need for a heating system was first brought up by the consulting architectural engineering firm which designed the building.

A heating system for the new building space was an inherent requisite of the building and the need for such equipment was not, therefore, much discussed by those involved. The decision by the plant Works Manager to purchase a heating system was rather summarily approved at the divisional level by the Chief Works Engineer and by the Vice President Manufacturing, Administrative.

There were many different types of heating systems available for purchase. Since the company, according to the Superintendent of Engineering, did not "normally do much along these lines" (plant expansion), one of the most influential persons involved in the purchase was the architect of the building. He submitted specifications and drawings advocating the type and make of heating-air-conditioning system which was eventually purchased, as well as the contractor who installed it. The Assistant Director of Purchasing felt that the architect had "more current, up-to-date information on building requirements." Since none of those involved at the company were very well-informed about the different heating systems available, they relied heavily on the recommendations of the architect. The idea of using a subcontractor for this "medium-sized project" was considered the most economical way of going about the installation, according to both the Director of Purchasing and the Works Manager.

The particular make of heating system chosen was selected because it could provide for both heating and air-conditioning in one unit, because it was compatible with the existing heating system already in the building, and because it had individual temperature controls in each room. The choice of this system was made by a number of people at a series of meetings. Those present at the meetings on the plant level included the Superintendent of Engineering, the Works Engineer, the Works Manager, the architect and a prospective contractor.

There were some differences of opinion about the adequacy of the system and whether or not the combination heating-air-conditioning facility was more desirable than a less expensive system which would only provide heat. These differences were resolved "by means of...normal engineering meetings," and "a lot of conversation," in the words of the Works Engineer. "This is a shared responsibility. You can't say any one individual is responsible," the Superintendent of Engineering said. However, the Superintendent of Engineering appeared to be the key person in this decision since the Works Manager indicated that he "had the responsibility for making the selection."

After the type of heating system had been selected, a recommendation for the purchase and installation of the system was given to the Director of the Purchasing Department who sent out inquiries and obtained bids from various contractors. Copies of this correspondence as well as the architect's recommendations were also sent to the Vice President of Manufacturing.

There were a great number of contractors available for the installation of the heating system, but only a few were considered for the job. "About five were considered," the Assistant Director of Purchasing said. The final decision was based on three factors. First, the contractor chosen offered the lowest bid; second, his company was familiar to those involved in making the choice, as this firm had performed factory maintainence work and repairs for the firm in the past; and, third, this contractor was recommended by the architect.

A requisition to purchase the equipment from the contractor and have it installed by him was signed by the Plant Superintendent of Engineering in July, 1966 and approved by the Superintendent of Engineering. (Usually, such requisitions go through the Works Manager of the plant but did not in this case.) The requisition was then submitted to the Chief Works Engineer on the divisional level. The proposal was then discussed at the divisional level, where it had to receive final approval.

There was a great deal of doubt about the wisdom of this purchase at the divisional level, centering around the high cost of the equipment and the "thermostats in every room (and) fancy controls," in the words of the Chief Works Engineer. A series of meetings were held at which the Chief Works Engineer, the Facilities Engineer and several other concerned persons on the divisional level, as well as the plant Superintendent of Engineering, the Plant Works Engineer, the Consulting Architect and the prospective contractor were present. The differences were finally resolved by the Vice President of Manufacturing in favor of the plant's request. The executive felt that it was company policy not to interfere with the autonomy of the department heads at the plants and he approved the requisition. On the strength of this policy, the measure was also approved by the Chief Works Engineer. A purchase order was signed by the Assistant Director of Purchasing (division level) on July 29, 1966.

Summary: Number Of Persons Mentioned As Involved In Decision

Top Management: Works Manager (plant); Vice-President, Manufacturing (division)	2
Engineering: Superintendent of Engineering (plant), Works Engineer (plant), Chief Works Engineer (division), Facilities Engineer (division)	4
Purchasing: Director and Assistant Director (division)	2
Other: Consulting architect	1
Total	9*

*Also, Works Engineer spoke to unspecified number of people at nearby plant of other company; also, undetermined contacts of consulting architect, who could not be interviewed.

IV. Sources Of Information About Product And Supplier

Asked about the ways in which they got information about the product or about suppliers of the product, people at the company gave the following information:

The plant Works Engineer first received information about the heating equipment and contractor from the specifcations and drawings of the consulting architectual engineering firm. He also visited a nearby plant of another company which had installed a similar system. He felt that this visit was the most valuable source of information for him because "if you can see any piece of equipment operate, it takes away a lot of the guess work about it."

The plant Superintendent of Engineering's main sources of information were the architects' drawings and recommendations. He also discussed the drawings with the Facilities Engineer and with the Chief Works Engineer at the divisional level meetings.

The Works Manager received all of his information from the Superintendent of Engineering who "had the responsibility for making the selection."

The Chief Works Engineer at the division level said his most valuable sources of information were the architectual specification and drawings. He also was influenced by brochures describing the heating equipment "because they clearly described the facility to be furnished." He received copies of the inquiry that was sent to the possible contractors by the Purchasing Department and then copies of the proposals from the various bidders.

The most influential source of information for the Assistant Director of Purchasing at the division level was the data supplied by the consulting architectural firm. He also got information from the Chief Works Engineer and from the plant Works Engineer.

Past purchasing experience was the most helpful source of information for the Director of Purchasing. He felt it was "important to get a reliable supplier who [would] do a good installation job and then stand behind it." He also saw the information about possible suppliers which was submitted by the architect.

The Vice-President of Manufacturing, Administrative, received his information from the architect's drawings and from discussions with the Chief Works Engineer and "his group."

Summary: Number Of Persons (Of Seven Interviewed) Who Got Information From From Following Sources:

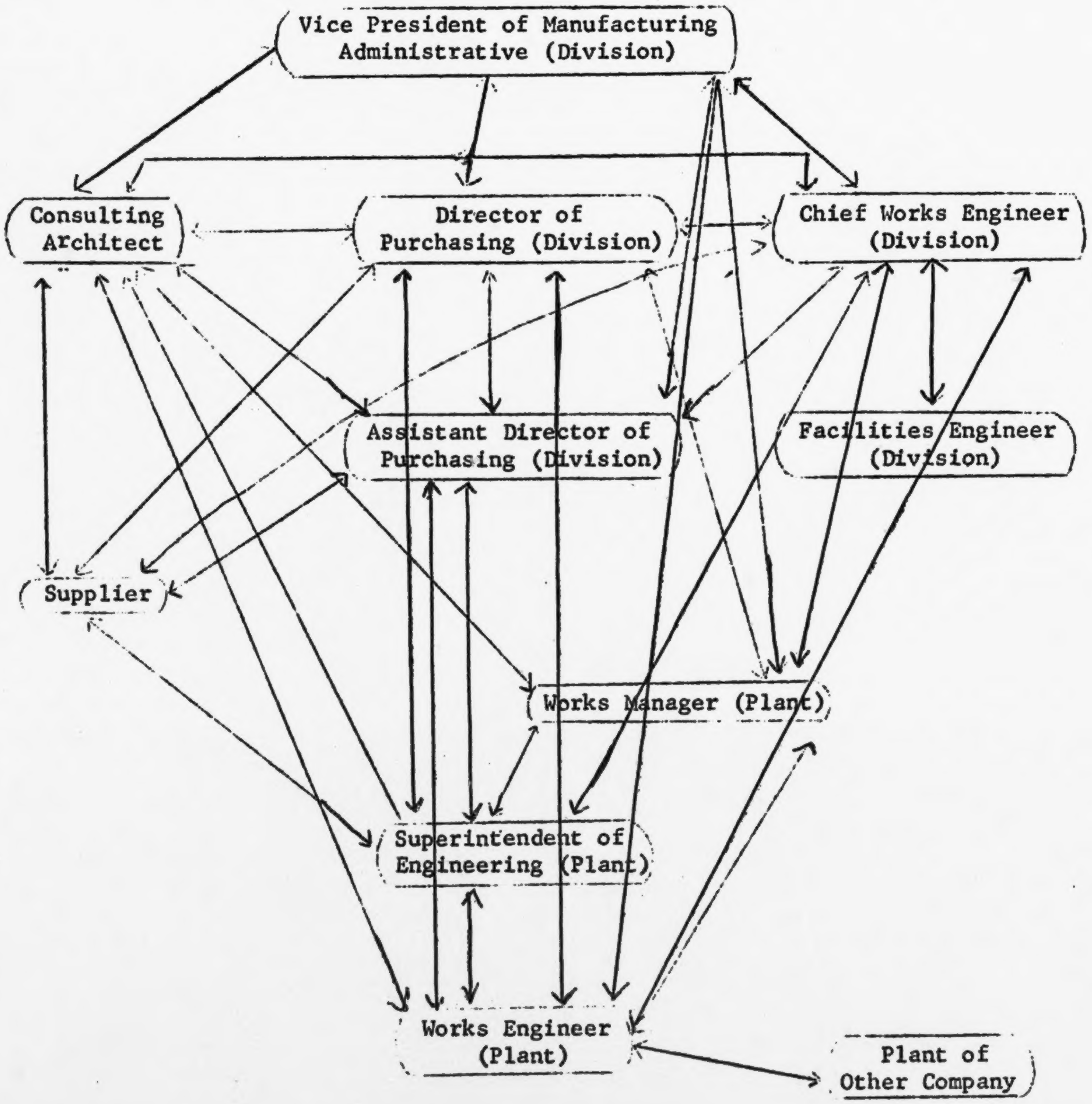
Others in company	4
Visited similar facility	1
Had previous experience with this type of product or supplier of it	1
Brochures	1
Information from person (consultant outside company	6

V. Satisfaction

Five of the seven key people interviewed said they were "completely satisfied" with the decision but two said they had been "not too satisfied" with the decision. Reasons given by those completely satisfied included the opinion that it was "the best, the most flexible system you can obtain." Of the two persons who said they had been dissatisfied with the decision when it was made, one commented that there was "insufficient competitive bidding on the improved specifications."

Asked whether they would be in favor of making the same purchase if the decision could be made over, four out of the seven said yes, but three said no. Of those who said yes, one man stated that the "heating system [had] performed satisfactorily." Another commented that "the use of sub-contractors is desirable to keep the cost down in "jobs of this size." Another man who said he would favor the same decision again had some reservations "because of the problems encountered in installation and workmanship." Of those who felt they would not be in favor of making the same decision again, one man who was originally satisfied with the decision, said that "it takes up a good deal of wall space," and that there was a lack of "co-ordination between the manufacturer and the contractor as far as installing the equipment in a timely manner." A second person would have made the same purchase, but with more competitive bidding. A third was "in favor of a lower cost [and] less complex design."

VI. Pattern Of Communications Concerning Purchase Decision


Vice President of Manufacturing Administrative (Division)
Consulting Architect
Director of Purchasing (Division)
Chief Works Engineer (Division)
Assistant Director of Purchasing (Division)
Facilities Engineer (Division)
Supplier
Works Manager (Plant)
Superintendent of Engineering (Plant)
Works Engineer (Plant)
Plant of Other Company

X. Contractor's Perception Of Purchase Decision

The President of the supplier firm, who had handled the purchase himself, said that he had most contact with the Chief Works Engineer (division level). Asked who he thought decided to buy the product from his company, he mentioned the plant Superintendent of Engineering, the divisional Chief Works Engineer, and the consulting architect. These were, in fact, the key people involved. When asked about the reasons his company was chosen to supply and install the heating system, he replied that the purchaser company was familiar with him on the basis of past services and that he was the lowest bidder, which he felt was of the "utmost importance in wholesale." In this, his opinion coincided with those expressed by the persons interviewed at the company.

33. CASE STUDY: DECISION TO PURCHASE FURNITURE FOR AN INDIVIDUAL OFFICE

I. Purchaser

The purchaser is the Automotive Division (composed of several subdivisions) of a large midwestern-based corporation. This division manufactures a variety of automotive parts. Purchasing for the division is conducted by its own Purchasing Department which also co-ordinates the purchasing activities of the twelve different plants within the division.

II. The Product Obtained

The product purchased is a set of office furniture (desk, credenza, swivel arm chair, and three side chairs), which is to be used by the advertising Manager, Automotive Group. He had previously been using older office furniture.

III. How Need For Getting Product Came Up

In October, 1965, the Advertising Manager had recently been promoted to his new position. He did not yet have his own office, but was slated to move into one soon. With regard to furniture, he said, "I was using inadequate furniture...a small desk...I didn't have enough room for my papers and things." He brought this matter to the attention of his superior, the Executive Vice President for Marketing.

IV. Deciding to Get New Furniture

The Executive Vice-President for Marketing agreed that the new Advertising Manager needed new furniture. "He was using old furniture, not adequate... he needed proper furniture," the Executive Vice-President for Marketing said.

Others in the company, though less directly concerned with the purchase, agreed on the need for new furniture for the Advertising Manager. The Director of Purchasing, to whose attention the Advertising Manager had brought his need, said that the Advertising Manager had been using "hand-me-downs." The Manager of Facilities and Equipment, who keeps records of all equipment throughout the corporation and who

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*Interviewing was conducted by the National Opinion Research Center, University of Chicago. Interviews with the Advertising Manager, the Director of Purchasing, the Purchasing Agent, and the Executive Vice-President for Marketing were conducted in January 1967. The Manager of Facilities and Equipment and a supplier representative were interviewed in April 1967.

also discussed the matter with the Advertising Manager, said that "what he had was old and dilapidated." The Manager of Facilities and Equipment also suggested that the matter of presenting "a better front" was involved. This is in accord with the remarks of the Advertising Manager that, in addition to his practical need, an important reason for the purchase was his new "position in the company." He commented further that "position plays a role in who gets what furniture, as well as budget allocation for that position. Also, I have outsiders come in. I'm a front window for our company."

The only problem that arose, according to the Executive Vice-President, Marketing, concerned the timing of the purchase. They were uncertain about whether to defer the purchase a month or so or to buy it right away. It was decided to get the delivery date to coincide with the time the Advertising Manager would be ready to occupy his new office.

The Advertising Manager's request for new furniture was approved by his superior, the Executive Vice-President for Marketing, and then by the Controller of the Automotive Group. The latter's approval, according to three respondents, was largely a formality.

V. Selecting the Type of Furniture

Only one supplier was considered for this purchase. "We buy from one source, furniture for all the offices...we try to standardize our furniture," the Purchasing Agent who handled the purchase explained. Asked why this supplier was chosen over others, he answered merely that this was due to "our experience doing business with this company." The Advertising Manager, for whose use the furniture was bought, was not sure why the particular supplier was used, saying "I guess the price is right and the furniture is good."

The Secretary to the Advertising Manager obtained a supplier catalogue from the Purchasing Department. The catalogue showed colored pictures of different furniture types. The Advertising Manager looked over the cataloque and chose the type of furniture he wanted. "There were several choices," he said, but "no choice of supplier." The Advertising Manager discussed the choice of furniture with the Purchasing Agent from the Purchasing Department.

The Purchasing Agent contacted the Sales Manager at the supplier company and "asked him to come in and give us information on delivery and price." Based on the Advertising Manager's preference among available alternatives from this supplier, the Purchasing Agent placed an order for the furniture approved by the Director of Purchasing, in October, 1966.

VI. Sources of Information About Product or Suppliers

Very little information relevant to this purchase was obtained by any of the five persons interviewed.

Asked about the ways in which he got information about office furniture or about suppliers of office furniture, the Purchasing Agent said, "We automatically buy from one company." He said he had not obtained any relevant information from people within or outside the company and had not seen relevant materials in any publications.

The Advertising Manager mentioned only the supplier catalogue as a source of information, and also mentioned his secretary as showing the catalogue materials to him.

The Executive Vice-President for Marketing, who approved the purchase, said he didn't get any information about this product or about suppliers and the Manager of Facilities and Equipment made a similar reply. The Director of Purchasing said that the Purchasing Agent "did all this... I didn't get involved."

All five men said that they got information from no other persons within or outside the company and all said that they had seen no relevant articles or advertisements in any publications.

VII. Satisfaction with Purchase Decision

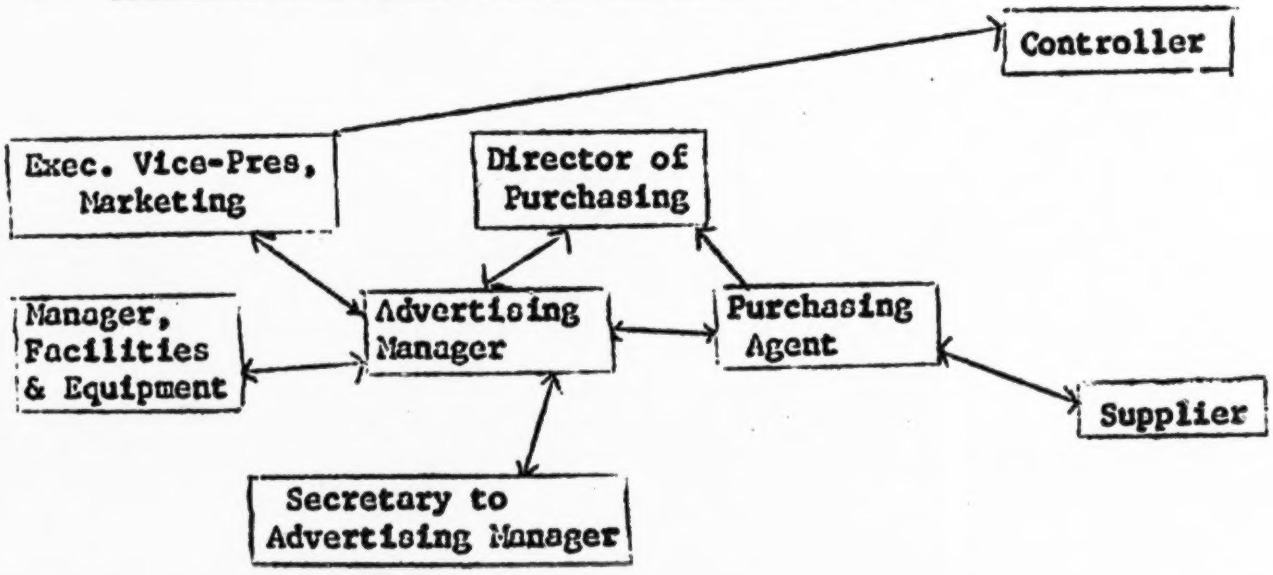
All of those interviewed said that they were satisfied with the purchase decision at the time it was made (except for the Purchasing Director who did not comment on this question since he had not been directly involved). Both the Executive Vice-President for Marketing and the Manager of Facilities and Equipment gave as reasons for their satisfaction that the Advertising Manager, for whom the furniture was bought, was satisfied with it. "It was what (the Advertising Manager) wanted," the Manager of Facilities and Equipment said.

The Advertising Manager himself commented, "I'm lucky to get it, I feel I have what I need to work and what befits my position." However, asked whether, if the decision could be made over again, he would favor making the same purchase, he said, "I would like to know what other suppliers have and their prices."

VIII. Summary of Persons Mentioned as Having any Involvement in Purchase

Top Management:	Executive Vice-President, Marketing; Controller	2
Marketing:	Advertising Manager	1
Purchasing:	Purchasing Agent; Director of Purchasing	2
Other:	Manager, Facilities and Equipment; Secretary to Advertising Manager	2
	Total	7

IX. Pattern of Communications Concerning Purchase


Controller
Exec. Vice-Pres, Marketing
Director of Purchasing
Manager, Facilities & Equipment
Advertising Manager
Purchasing Agent
Supplier
Secretary to Advertising Manager

X. Supplier's Preception of Purchase Decision

The sales representative from the supplier said that he had had most contact with the Purchasing Agent at the purchaser company. Asked who he thought took part in the decision to buy new office furniture, he said he didn't know. Likewise, he said he did not know who at the purchaser company chose to buy from his company rather than from another supplier.

"We have been selling to (purchaser company) for twenty-four years; they know us well," he said. Asked why he thought the purchaser company bought from this supplier rather than from another supplier, he said at first that he did not know. Asked to speculate about this, he supposed that it was due to "price and service--also quality. We've been doing business with them for so long that they know us."

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